Specialized Oil Publications of
THE GULF PUBLISHING COMPANY

The OIL WEEKLY and The COMPOSITE CATALOG for the drilling-producing-pipeline industry

PETROLEUM REFINER and The REFINERY CATALOG for the refining-natural gasoline industry

THE OIL WEEKLY

ENGINEERING • NEWS • STATISTICS

Published by THE GULF PUBLISHING COMPANY, Houston, Texas

R. L. DUDLEY, *President, Publisher* A. L. BURNS, *General Manager*

TOM W. NELSON, *Advertising Manager*

ADVERTISING STAFF

DICK SWINSKY.....New York
C. L. HASKINS.....Cleveland
H. G. FITZPATRICK.....Chicago
J. F. CARTER, JR.....Tulsa
J. W. CURTS.....Los Angeles
CHAS. WYATT.....Houston

BRANCH OFFICES

NEW YORK.....250 Park Ave. (17)
CLEVELAND.....1010 Euclid Ave. (15)
PITTSBURGH.....429 Fourth Ave. (19)
CHICAGO.....332 S. Michigan Ave. (4)
LOS ANGELES.....W. W. Wilson Bldg. Huntington Park, Calif.
TULSA.....Hunt Bldg. (3)
FORT WORTH.....W. T. Waggoner Bldg.
WASHINGTON.....Albee Bldg. (5)

CIRCULATION DEPARTMENT

G. D. CROFTON.....Manager

Member Audit Bureau of Circulation and Associated Business Papers, Inc.

EDITORIAL STAFF

WARREN L. BAKER
Editor

J. KENT RIDLEY
Managing Editor

SILAS B. RAGSDALE
News Editor

L. J. LOGAN
Associate Editor

DISTRICT EDITORS

BERTRAM F. LINZ.....Washington
H. H. KING.....Fort Worth
ANTHONY GIBSON.....Tulsa
R. W. BYRAM.....Austin
E. S. BUNCH.....Los Angeles
ELTON STERRETT, A. R. McTEE, DON L. CARROLL, TOM L. TURNER.....Houston

LOOKING AHEAD
... with the Editor

SETTING a casing string with a total weight of 155.91 tons, and involving the bucking up of nearly 600 separate joints, is in itself a noteworthy achievement, but when that same casing string extends 15,278 feet, it becomes a new world's record; surpassing the former deepest string by almost 1000 feet. This casing, run in Phillips Petroleum Company's Price 1, West Texas wildcat, is of the double-taper type, providing required collapse strength at bottom and adequate tensile throughout without exceeding safe loading on any section of the string.

Description and pictorial presentation of the running of this world's record string, based on the material and photographs collected at the well by a staff representative of THE OIL WEEKLY will appear next week.

THE OIL MAN'S CALENDAR

MAY 25-26	Spring Meeting, Mid-Continent District, API, Division of Production, Mayo Hotel, Tulsa.
JUNE 13-14	Spring Meeting, Southwestern District, API, Division of Production, Rice Hotel, Houston.
24	Kentucky Oil and Gas Association, Mid-Year Meeting, Hotel Lafayette, Lexington.
OCT. 3- 4	American Association of Oil Well Drilling Contractors, Blackstone Hotel, Fort Worth.
12-13	Texas Mid-Continent Oil & Gas Association, Houston.
NOV. 13-16	American Petroleum Institute, Stevens Hotel, Chicago.

Contents . May 22, 1944

Volume 113, No. 12

The Changing Panorama..... 7

Technical and Feature Articles:

Exploration Completions Continue at Active Rate.....13
BY L. J. LOGAN

Oil and Gas Fields, New Pay Discoveries, April, 1944.....14

Treating Gas Sands to Overcome Bad Effects of Water.....18
BY K. J. SONNEY AND CHARLES E. WILLIAMS

Speed Control by Hydraulic Device.....26
BY J. RAY POLSTON

Major Oil Province Promised in Southeastern States.....29
BY L. J. LOGAN

Practical Operating Hints for the Drilling Rig.....40

News and Departments:

Looking Ahead With the Editor..... 5

Washington Roundup 9
BY BERTRAM F. LINZ

Letters to the Publisher.....68

Pipe Line Review.....44

Markets, Statistics and Prices.....48

United States Field Operations.....51

United States Exploratory Completions.....64

United States Wildcat Starts.....65

Squeaks from the Bullwheel.....66

Notes for the Equipment Buyer and User.....70

Index to Advertisers.....72

CENSORSHIP NOTICE—Censorship rules occasionally make it necessary to tear out or otherwise delete parts of publications destined to subscribers outside the United States. If there be such deletions in copies of THE OIL WEEKLY going abroad, they are at the request of the Office of Censorship. Copies sent abroad face unavoidable delay because of time necessarily consumed in passing the publication through the Office of Censorship.—*The Publisher.*

Published Every Monday. Single Copies 15 cents (Except Special Issues). Subscription price: domestic and foreign, $2.00 a year; 2 years, $3.00. Advertising rates on application.

Copyright 1944 by The Gulf Publishing Company.

NORRIS SUCKER RODS

QUALITY RANKS FIRST

Experience Building Oil Tools

SINCE 1882

For over half a century the name W. C. NORRIS and QUALITY have been synonymous in oil tools. Years of experience devoted to exacting experimentation and study to improve processing and manufacturing make NORRIS—the top quality Sucker Rods on the market. Each rod is carefully built from materials of known strength, composition and uniform characteristics with rigid adherence to A. P. I. specifications and close control over each step in manufacture, including normalizing, heat treatment, forging and finish precision threading. Available in 25 to 30 foot lengths. Select NORRIS QUALITY SUCKER RODS to meet your particular requirements with the assurance that you are buying maximum service at lowest cost.

Type 20 Carbon Steel
Recommended for regular to heavy loads where corrosive conditions are not a factor. These rods are giving excellent service, replacing in many instances competitive rods of supposedly higher grades steel. A.P.I. Specifications: Box & Pin and Double Pin.

Type 30 Carbon Manganese Steel
Recommended for extra heavy pumping conditions where corrosion is not a factor. CARBON-MANGANESE Steel to special Norris alloy specifications. Very high ultimate tensile strength, yield point and shock resistant qualities. Box & Pin and Double Pin.

Type 40 Nickel Molybdenum Steel
Recommended for wells where heavy loads are encountered and where irregularities in pumping movement are unavoidable. The NICKEL and MOLYBDENUM content in this rod eliminates entirely its chief resistance to corrosion fatigue. A. P. I. Specifications. Double Pin Type only.

W.C. NORRIS MANUFACTURER, INC

TULSA, OKLAHOMA

BRANCHES
HOUSTON, KILGORE, ODESSA, TEXAS. SALEM, ILLINOIS
West Coast Distributors:
REPUBLIC SUPPLY COMPANY OF CALIFORNIA, Los Angeles

ARMY E NAVY
QUALITY MARKS FRIENDS

EXPORT OFFICES:
Room 1940 30 Rockefeller Plaza,
New York City

BUY WAR BONDS FOR VICTORY

The Changing Panorama

Changes to Follow European Victory

THE coming invasion of Europe can result in sudden shifts in the American business picture.

Military analysts, now foreseeing Allied superiority in quality and quantity on both the land and in the air, are predicting a fast-moving offensive that will bring a quick decision. Just as soon as invasion success can be set down as assured, military demand for material can be regulated more closely to actual use. Heretofore, except in aircraft, production of military implements has been for an uncertain market, making it necessary to pile up large amounts of many things on the chance that they might be needed.

Invasion success could cause sudden decisions relating to trucks, guns, tanks, ammunition, etc., that would permit a sharp reduction in new orders. Basic materials, such as steel, copper, lumber, etc., might pile up rapidly once orders are reduced. This probably would result in the allocation of larger quantities of these materials to oil and other essential industries.

Spacing Relaxation May Mean More Oil

MID-CONTINENT oil men believe more oil will be available, and quickly, if recommendations made by an engineering subcommittee appointed by the production committee of District 2, and submitted recently to PAW at a meeting in St. Louis, are adopted.

The subcommittee recommended that PAW relax its 40-acre spacing in 50 pools in 17 Central and Western Kansas counties to permit drilling on 20 acres, and further, that PAW permit 20-acre drilling in any pool in any state when the majority of operators in a pool ask it.

The recommendations are being considered by PAW in Washington and oil men hope favorable directives will be issued.

But PAW directives alone will not be sufficient. Availability of material will be an important factor and while WPB has advised that it is willing to make supplies available wherever possible, the government agency has also declared that it has no intention of stacking up materials where they are not needed immediately.

In the event PAW relaxes the spacing rules and material is available, operators believe Kansas will boost its oil production appreciably.

Sacred Obligation Of Every Voter

DR. WILLARD H. DOW challenged all of us to basic thinking about what we really want in our government recently when he spoke in New York, on "The Meaning of Freedom."

"How many of us," he wondered, "are watching for a chance to break out of the lock step of thought in which we as a people are now marching and do a little walking at our own gait? And how many of us are just watchfully waiting for the line to break of itself, or, better yet, to be broken by someone we elect or select for that purpose? In other words, how many of us have the burning passion to step out for freedom?"

The implied indictment is a serious one. We are inclined to let somebody else do our thinking and acting for us in public matters. The general attitude toward politics is that it is a kind of dirty business that one should shy away from. More often than not we do not really concern ourselves with the qualifications of those we elect to represent us. Our private affairs consume the best of our time, and if we devote any thought at all to government, it often is either by way of diversion or chance. What wonder then, that we are confronted with problems of great magnitude?

As never before in our history there is need for determination in political thought and attitude. Every voter in the nation has an obligation to become informed on issues of the day so that he can demand of candidates their solutions to the problems that affect us all, and best make up his mind on those really qualified to hold office.

The greatest sacrifices in history are daily being made in the name of freedom by our men in the services around the world. It seems incredible that we should need to be reminded of our own duties to the sacred principle in the conduct of affairs at home.

That Foreign Oil Policy

IF THE United States State Department, in its search for an oil policy, gets no further than a mess of platitudes, then the State Department not only has failed in its duty but has ill served the American people as well.

We do not know what was decided upon, if anything, at the recent conference between British and American representatives who met to consider the international oil situation. Nor do we know of any reason why secrecy should veil a conference in which all American consumers of petroleum products, not to mention companies engaged in the oil business, have a vital interest.

All we do know is that there is a general impression that platitudes ruled the day and that considerable time was wasted.

Our government must learn:

1. *That our British allies are realists—are men who not only are acquainted with their own needs and desires but have a deserved reputation of converting such needs into accomplished facts.*

2. *That when only one of two groups, meeting for a trade or an agreement, KNOWS what it wants, that's the group that usually puts across its ideas and winds up with the gains.*

As we see the situation, The United States and the British have so much in common that some plain talking can be indulged in without the crown sheet being blown off—and if there ever was a time for straightforward dealing on the part of both it is now.

The United States should only ask for and insist upon that to which it is entitled. If there is a difference of opinion as to whether or not it is entitled to what it wants, only plain talk can settle the matter. The same thing should apply to the British.

We would far rather commend our State Department than to criticize it, but we are weary of waiting for it to offer something to commend.

Shame!

THE blood of American dead on the battlefields of this war throughout the world cries "Shame" to an administration in Washington which seizes a noncombatant plant like Montgomery Ward in order to pay a political debt, and the

BUY WAR BONDS FOR VICTORY

while dilly-dallies while its political ally, the CIO, through a strike of foremen, cuts down production of fighter planes by 251. Americans with boys on the battle fronts will remember this when, in the orderly processes of democracy, they have an opportunity to express themselves at the polls.

Oil Price Increase By Congress Fades

NOT long ago, there were loud cries in Congress against OPA. Congressmen threatened to enact legislation providing higher prices for several commodities, including crude oil. Also many were dissatisfied with the way OPA was handling rationing, wages and other matters.

Today, Congressional revolt against price and wage control appears to be waning. OPA Chief Chester Bowles is better liked than his predecessors, Leon Henderson and Prentiss Brown.

This change in attitude is important, especially since the Price-Control Act expires June 30. It now appears likely that act will be extended, and without crippling amendments or major changes. Renewal of the act in about the same form as it now stands would mean no important changes in prices or wages are in prospect. This materially reduces the chances of increasing oil prices by legislative act. Although the industry and oil state congressmen say they will continue fighting for higher prices, the lessened opposition to OPA probably has reduced the number of votes such a measure can muster.

And it should not be forgotten that the man who appoints the bureau heads is opposed to an oil price increase.

"There is an enormous reserve of oil in the Near East which has been depleted very slightly to date, and the oil developed there has resulted from a limited amount of wildcatting; far less than we are accustomed to in this country. I think the potentiality for the future is tremendous.

"The region extends all the way from the Turkish border on the north down about half the length of Saudi Arabia, down below Bahrein Island. I would say offhand that the length would be 1000 miles, linear distance from northwest to southeast, and the belt that has particular promise is possibly 500 miles wide.

"We should take due account of the oil situation in the Near East in view of our own situation in which we are not developing currently as much oil as is being withdrawn from our fields. We must look to the future and give due regard to sources of supply that will supplement our own supplies as they decline."

DR. W. E. WRATHER, *Director United States Geological Survey*

It's Government Oil Despite Ownership

THOSE who insist that the United States government should enter into the development of foreign oil resources as an insurance against future domestic oil famine, have lost sight of the fact that it is not necessary for a nation itself to enter the oil business—or any other business—to be assured of control of that supply in the event of war.

From a national defense viewpoint, a policy of government ownership of oil supplies is entirely unnecesssary, for in war the resources of a country are directly available to the government notwithstanding private financial interest or private title. Have not the privately-owned steel, railroad, oil, and other industries of the United States devoted their full energies to the American war effort? Does any one think that if American capital had developed oil production in Germany prior to 1939 that the Germans would have hesitated to have seized and used it the moment hostilities threatened? Or, does any one believe that a German-owned oil industry in any part of the British Empire would have been taken over and used by Great Britain?

Direct governmental control of a supply source, then, is of no real military value in the event of war. What is important is the location of the supply. Preferred is a supply in the homeland itself, and to prevent delay in its availability the producing capacity should be developed as extensively as possible. If foreign sources must be depended upon, the control of world shipping lanes is more important than ownership. For in time of war, control of sea routes makes every oil field in the world a potential source of supply. Conversely, if sea lanes cannot be kept open, oil in any foreign region would not be available regardless of ownership, and, of course, the farther the source of supply is from home, the more difficult it is to control sea lanes.

Texas Nears Its Producing Limit

TEXAS production schedule for June will boost the state's output of crude oil to near its estimated maximum efficient producing rate. Since other states already have reached their efficient limit, this will leave the nation without much additional unused producing capacity. The crude-oil supply situation has been very tight for some months, especially for sweet oils in Texas, and the higher producing rate for June means that it will be that much tighter. Considerable difficulty is being experienced in finding fields with the ability and transportation facilities, to supply the increase, particularly of sweet oils. It has become necessary to make minor upward adjustments in some of the smaller fields of the sweet oil areas of the Gulf Coast, East Texas and North Texas.

The Texas Railroad Commission has set the state's crude oil allowable at a level expected to result in a daily production of 2,034,069 barrels during June. This is about 37,000 barrels per day greater than actual production during May, 140,000 barrels daily over December, 1943, and nearly 650,000 barrels above December, 1942. At 2,034,000 barrels daily, Texas is approximately 50,000 barrels below its estimated maximum efficient producing rate, and practically all of this surplus is in West Texas.

Oil Companies Aid Paper Conservation

ALERT for practical paper conservation ideas, Humble Oil & Refining Company awards cash to its employees for paper-saving suggestions through its "Coin-Your-Ideas" contest. As a result steps have been taken to reduce size of forms or changes made to adapt one form for use in several departments. "All forms which come up for reprints are carefully checked for weight of paper required as well as for size, general layout and quantities necessary," an official explained.

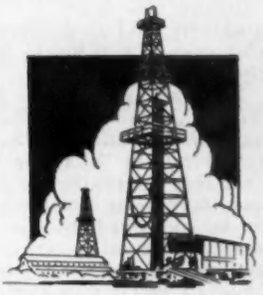
Socony-Vacuum Oil Company also has made substantial paper savings in its effort to help ease the paper shortage. J. R. Taylor, purchasing agent for that company, has adopted the policy of analyzing every requisition received for printing or paper stock.

Various companies have found valuable the paper conservation check sheets, issued by the Joint Committee on Government Relations of the Commercial Printing Industry, 461 Eighth Avenue, New York 1, New York.

Discussion Time

THE Petroleum Division of the American Institute of Mining and Metallurgical Engineers are to be complimented on the fine program of papers presented at its recent Houston meeting. The only suggestion for improvement heard was that fewer papers would have given more time for discussion.

WASHINGTON ROUNDUP



By BERTRAM F. LINZ, Washington Correspondent

INVESTIGATIONS were the order of the day in Washington last week, with four committees inquiring into oil matters as follows.

Black Market—Under the temporary chairmanship of Representative Lyle Boren of Oklahoma, the House oil subcommittee, investigating the black market in gasoline, heard charges of independent jobbers of discriminations in distribution and questioned PAW officials on that subject, particularly from the angle of directive 59, PAO-1 and PAO-5.

Elk Hills—The House Naval Affairs Committee heard Navy and Army officials on the need for additional supplies of crude oil on the Pacific Coast in connection with the former's application for authority to increase output at Elk Hills from 15,000 to 65,000 barrels daily, and was told by Chairman Carl Vinson of Georgia of an agreement he has reached with the Navy for legislation authorizing development of the field under Congressional guidance.

Oil Prices—The House Banking and Currency Committee, studying extension of the emergency price control act, heard the opposition of OPA officials to any general increase in the price of crude oil and learned of war-wealthy munitions makers who are using excess profits in oil exploration and operation "to escape taxes."

World Situation—The special Senate committee under Senator Francis Maloney of Connecticut held another meeting, one of several at which the members have discussed the program for their investigation, and will hold another meeting this week at which a decision may be reached whether to open public hearings before the recess of Congress.

Government Oil Leases—A new field of public land development is foreshadowed in regulations issued by the Department of Agriculture for the granting of leases on lands under its jurisdiction, including the many thousands of acres acquired by the Farm Security Administration under the farm-tenant program which it ran during the depression.

June Certification—A daily output of 4,879,100 barrels of petroleum liquids, a new high level of production, is called for by June certifications issued by PAW.

Cartel-Registration Bill—Hearings will open May 23 before the Senate judiciary committee on the so-called Cartel-Registration Bill sponsored by Senator Joseph C. O'Mahoney of Wyoming, with Ralph Gallagher, president of Standard Oil Company (New Jersey) as the first witness.

Congress Seeks Formula to Meet Need For Immediate Elk Hills Production

An immediate increase of 50,000 barrels daily in production from the Navy's Elk Hills reserve is being sought by the department to meet an urgent war need for additional oil.

Passage of a joint resolution permitting the Navy to produce 65,000 barrels daily has been asked of Congress by Acting Secretary of the Navy James V. Forrestal and Assistant Secretary Ralph A. Bard, without reference to whatever policy may be adopted with respect to unit operation of the reserve.

The government's need for oil, expressed in a request from the joint chiefs of staff, was disclosed at hearings before the House naval affairs committee May 15, at which it also developed that the Navy Department is reconciled to having Congress retain control of the course it is to pursue in the Elk Hills field.

There is "critical need" of additional oil from Elk Hills, Forrestal said, and the oil which it is sought to produce has a direct relationship to the 100-octane gasoline program.

At the same time, the department is powerless to take any steps under the present law, but the matter is so important it should be disassociated from the general legislation which is under consideration, he said, and the department should be authorized to proceed with production until tankers are available to carry oil to California from other points.

Chairman Carl Vinson of Georgia at the opening explained he was opposed to pending legislation authorizing the Navy to enter into a contract with Standard Oil Company of California for unit operation, and in discussions with Navy officials had developed new policies which would eliminate objectionable features of the bill.

Declaring that the legislation originally proposed by the department would completely scrap the present policy of conservation of the naval reserves, Vinson listed a number of objections to the bill and the contract for which it provides.

Objections Eliminated

The bill and contract, he charged, would permit the reserve to be produced to the point of complete exhaustion without authority from Congress; the Navy would be able to launch on an unlimited program of development without the approval of Congress; control would be taken completely from Congress; the bill is unnecessary in the interests of conservation because existing legislation gives the Navy all the powers necessary—"the only thing necessary is willing Navy to exercise these powers." Finally, he said, the bill is much broader than necessary to provide for emergency development.

These objections, he said, are eliminated in an accord reached with the Navy setting forth the principles to be embodied in the legislation.

Under that agreement, which was a "personal" one to serve as the basis for suggestions to be considered by the committee, determination of the necessity for producing oil in Elk Hills and the amount of production is to be in the control of the Navy. with approval of Congress; the problem of drainage is to be eliminated; under no circumstances shall oil be divided among the participants in production on a basis other than their proportional share in the ground; Navy oil shall be offered for sale on competitive bids; all expenses incurred in operation shall be met out of funds appropriated by Congress, and all receipts of the Navy for oil shall go into the Treasury, and no private participants shall receive any tax immunity by reason of its relationship with the government.

Vinson said the department has agreed to these principles, to be embodied in new legislation and a new contract with Standard Oil Company of California and in the event the Navy cannot make an agreement with the company, he declared, it "is essential" that the government either purchase the company's lands in the reserve or acquire them by condemnation.

Under this accord, he pointed out, as between the Navy and Standard Oil Company, it will be the Navy in

authority, and as between the Navy and Congress, it will be the latter which has the final word.

The advantages of the legislation, Vinson explained, will be that the Navy has the sole and final authority for determining the oil to be produced, with Congress approving by joint resolution; any increase in production would have to be approved by Congress; Navy's share of the oil would be sold on competitive bids and all purchasers would have an equal opportunity to buy; oil in the reserve will not be used to finance development, making it impossible for the Navy to by-pass Congress; and the terms of the contract will be so drawn as to leave Standard Oil Company of California subject to such taxes as it would have to bear if it were not associated with the federal government.

In direct charge of the matter since the death of Secretary Knox, Assistant Secretary Bard told the committee that "the Navy Department's position is unchanged. . . . We do not believe that condemnation is necessary or desirable."

Action Needed Now

Bard, however, emphasized that the immediate problem of increased production from the reserve must be met now, irrespective of what final permanent disposition is made on long-range policy."

Four ways in which this need for increased production could be met have been outlined to the committee:

1. Enactment of the bill authorizing the contract with Standard Oil Company of California.

2. Enactment of a joint resolution authorizing production, followed by a cooperative plan of development with the company eliminating the drainage question and protecting the government's interest until a permanent solution could be worked out.

3. Purchase of Standard Oil Company of California's lands on the basis of payment through the years of a percentage of the cash proceeds of each barrel of oil, followed by the enactment of legislation approving the purchase and authorizing production.

4. Enactment of a joint resolution which, in addition to authorizing production, would direct Navy to condemn or take possession of the Company's lands.

"Since these alternatives were suggested it has become plain that No. 3—the purchase of the lands—is not feasible because negotiations would be time-consuming and there would be no assurance of final success," Bard said. "But meanwhile another alternative has evolved—a new bill incorporating certain additional safeguards which were outlined by Chairman Vinson in his opening statement.

"If such a bill could be promptly passed, accompanied by a joint resolution authorizing production of a specified amount of oil to meet the joint chiefs' request, we could either work out a revised agreement with the company, or failing, we could proceed by condemnation.

"We are hopeful that such a revised agreement can be worked out with the company once it knows precisely what the legislative formula is."

If legislation cannot be enacted quickly, Bard urged that a resolution be passed authorizing the Navy to develop and produce up to 30,000,000 barrels of crude prior to December 31, 1945.

Rush for Depletion Allowance by "Outside" Firms Draws Complaint

Munitions makers and others who are avoiding excess profits taxes by engaging in oil exploration are creating a situation of which much complaint already has been voiced by oil operators, it was disclosed last week in Washington.

Testifying before the House Banking and Currency Committee during hearings on extension of the Emergency Price Control Act, Orville Judd. OPA oil price executive, was asked by Representative Wright Patman of Texas whether it was true that many companies never before engaged in the oil business are now exploring because they can use their excess profits in that way without having them subject to the full amount of the excess-profits tax.

Agreeing that this was the case, Judd told the committee that oil men have come to him with complaints, objecting on the basis that other companies making profit from war industry use those funds to the detriment of the regular oil operator.

Patman pointed out that not only can these companies save excess profits from taxation but, in the event they find oil, can take the 27½ percent depletion allowance which insures them of a profit on the investment.

In effect, it was pointed out, these munitions makers and others are "drilling on 10- and 20-cent dollars" and, since they can afford to pay higher wages and salaries, are in a position to raid the already depleted ranks of the oil industry to secure geophysical and other labor.

Judd told the committee that there is more exploration under way now than at any time since 1937, and that it is anticipated 5000 wells will be drilled this year, against 3600 in 1943.

His testimony drew from Patman the comment that since excess profits are being used to a large extent in this endeavor, no price increase for oil should be necessary to encourage exploration.

Price Administrator Chester Bowles also discussed the oil situation before the committee, opposing the granting by Congress of a parity formula for oil prices as proposed in the Disney bill, on the ground that OPA would be unable to confine it to the petroleum industry and, should it be extended to all industry, prices would be raised by about $18,000,000,000.

Increasing the price of oil to a parity concept level would raise the price about $1,000,000,000, he estimated, while the recommendation now before Stabilization Director Fred M. Vinson for a stripper-well subsidy will cost the government only about $50,000,000, while taking care of 80 percent of the distress cases.

At the OPA, it was explained that if Director Vinson approves the stripper-well plan, the remaining 20 percent of hardship cases, composed of high-cost wells not in the stripper category, will be relieved through proposals for carrying for such operators on an individual basis, either direct or through PAW.

It was said that Vinson's decision was expected in the near future, although he has not yet received comment on the proposal from PAW to which it was referred last month. PIWC canvassed the proposal at its May meeting, taking the position that while it was opposed to subsidies in principle it would not stand in the way of relief for any operators who needed and were willing to accept it, and PAW is expected to take a rather non-committal attitude in the matter, much to the same effect.

Department of Agriculture Issues Oil Leasing Rules

The Department of Agriculture last week signalized its entry into the oil business with the publication of regulations for the granting of oil and gas leases on lands under its jurisdiction other than those reserved from the public domain or acquired by exchange under the Act of March 20, 1922 (which are subject to the mineral laws administered by the Interior Department), or to lands acquired in satisfaction of a loan from any agency under the supervision of the Farm Credit Administration.

Under provisions of the Bankhead-Jones Farm Tenant Act of July 22, 1937, the Farm Security Administration is required to retain an undivided three-fourths interest in the underlying oil, coal or other mineral rights on any lands disposed of by it and, considering that in that Act Congress expressed a definite policy, the department has applied the same provisions to other lands under its control, where there is reason to believe the sub-surface rights may have value.

The regulations provide that leases may be issued where there is well established necessity for production, or for the development of additional oil and gas reserves, to meet war needs, or where the actual or impending development of resources of non-federal lands may, without adequate compensation to the United States, drain the oil and gas resources of the lands administered by the department.

To prevent monopoly or concentration of control of resources owned by the government, no single holder of leases may secure a lease from the department which, with any other leases hold on government lands, will give him in excess of 2560 acres within the geologic structure of the same producing oil or gas field or a maximum of 7680 acres in any single state, except where operation is under an approved unit plan. Where the government owns only an undivided fractional interest, the area charged against those limits shall be that part of the total acreage involved in the lease which is proportionate to the ownership of the United States of the resources therein, but not to exceed 5120 acres with the geologic structure of a field or 15,360 acres within any single state.

Leases are to be granted on the payment of a bonus, on a rental, payable in advance, of 25 cents per acre for the

first year, 50 cents for the second year, 75 cents for the third year and $1 thereafter, with the highest rate applicable at the beginning of the lease year following a discovery.

Rentals will be credited on the royalty which, based on a price of $1 per barrel for oil, will run from 12.5 percent for production of less than 50 barrels per day per well to 32 percent for production over 2000 barrels daily. Adjustment of royalties is to be made where the price of oil is less than $1, but the percentage is not to be less than 12.5. The royalty on gas will run from 12.5 percent for production not exceeding 5,000,000 cubic feet per day per well to 16 2/3 percent on production above that figure.

For production from a new oil or gas field, the royalty is to be 12.5 percent for a period of 10 years following the date of discovery.

Alaskan Oil Exploration Funds Asked of Congress

An appropriation of $1,217,000 was asked of Congress last week by President Roosevelt for development of Alaskan oil resources by the Army Engineer Corps and the Interior Department.

In a message setting forth the need for the money, the President pointed out that the war in the Pacific may continue for some time, involving heavy petroleum demands in that area.

Since the publicity given the Army's Canol project and criticism of its failure to look first to United States-owned resources, both the Army and Navy have been giving consideration to the Alaskan potential fields and both have projects for exploratory work designed to test their possibilities.

Oil Men Participate in Annual Safety Conference

The Oklahoma Industrial Safety Conference at Tulsa May 17-18, heard from oil industry representatives how safety has paid dividends, especially in the stress of wartime operations. The oil industry figured prominently in the conference.

Tulsa oil men participating in the conference included Don A. Klemme, Stanolind Oil & Gas Company; Henry W. Bogess, Sinclair Prairie Oil Company; W. J. Overton, Hinderliter Tool Company; Don Redfoot, Stanolind Pipe Line Company; M. A. Turpin, Black, Sivalls & Bryson; Elmo D. Murphey, Mid-Continent Petroleum Corporation, and R. A. Lauder, Shell Oil Company.

Other oil men on the program or who helped arrange it included C. A. Miller, The Texas Company, Houston; DePree Alfred, Ben Franklin Refining Company, Ardmore, Oklahoma; Fred A. Brunkaw, Cities Service Oil Company, Ponca City; W. W. Duncan, Associated Refineries, Duncan; S. R. Ellis, Jones & Laughlin Supply Company, Duncan; E. R. Esters, Cities Service Oil Company, Bartlesville; J. K. Griffith, Anderson-Prichard Oil Corporation, Cyril, Oklahoma; G. D. Meeker, Deep Rock Petroleum Corporation, Cushing; Donald McKinney, Elmer C. Plieman and I. T. Simmons, Barnsdall Oil Company, Earlsboro; and Clyde E. Sanoot, Barnsdall Oil Company, Cromwell, Oklahoma.

Gasoline Black Market Probe Turns Into Investigation of PAW Orders

Investigation by the House oil subcommittee of the black market in gasoline turned last week into a probe of PAW Directive 59 and PAO-5, but efforts of members of the subcommittee, particularly Representative Clarence J. Brown of Ohio, to cross-examine Ralph K. Davies suffered delay when, by reason of the sudden absence of Administrator Ickes, the deputy administrator was unable to make a scheduled appearance.

A statement on the general oil situation, which Davies had planned to read, was submitted to the subcommittee through J. Howard Marshall, assistant deputy administrator and chief counsel, who was permitted, however, to read only that portion dealing with the directive and order and then, with other PAW officials, including H. W. Dodge, district director in charge of the New York office, was questioned exhaustively regarding complaints that distributors whose business has increased were being refused supplies above their percentage allocation.

The appearance of the PAW contingent followed that of John D. Meyer, secretary of the Eastern Petroleum Importers Conference, who charged independent jobbers on the East Coast were being discriminated against in favor of the major companies and alleged that independents who complained of discrimination in allocations from distributors were given "deals on the side" by PAW.

Wants Directive Repealed

Meyers, introduced by Representative L. Mendel Rivers of South Carolina, urged enactment of the latter's bill repealing directive 59, and recommended that the allocation system be abandoned and each supplier furnish to jobbers the amount of gasoline for which they have ration coupons.

The association secretary refused to give specific examples of alleged discrimination in open hearing because of fear of PAW reprisals, and the subcommittee held an executive session at which that angle was further explored.

In his prepared statement, Davies recounted the achievements accomplished in raising 100-octane gasoline production to its present level of more than 400,000 barrels daily, but explained that because of the distances involved in getting the fuel to the fighting fronts not all of that output can immediately be translated into air operations; to get 1000 barrels a month into bombers' tanks, he said, 3000 barrels must always be in reserve behind the lines in the war theatre itself and 2000 barrels be in manufacture and in transit.

Domestic crude production, now running 4,700,000 barrels daily, which is 500,000 barrels over output a year ago, is now near the limit of maximum efficient capacity in all areas, and increasing dependence is being placed on imports, now running 100,000 barrels daily to the East Coast and destined to increase substantially by the end of the year, he said.

Pipe Line Development

Davies reported that the transportation problem has been met through the construction, reversal and conversion of 11,388 miles of pipe line up to April 1, last, with another 600 miles to be completed in the next few months. Total supply to the Eastern Seaboard now runs at 1,700,000 barrels daily, as against 1,369,000 barrels a year ago, and the overland movement into District 1 is higher than the total land-and-water movement before the war.

In the field of refining, he stated, a major problem has been that of increasing the availability of crude oil to District 2, but while there is still some additional refining capacity available in that area the crude runs in the district reached 1,153,000 barrels a day in April, or 283,000 barrels above the average peacetime runs of 1939.

Efforts also have been made to utilize small plants, and studies indicate that fewer refineries are idle now than during peacetime, that the average throughput of refineries of less than 5000 barrels a day rated capacity has increased and that more small refiners have been able to increase plant capacity than was the case in the period from 1936 to 1941.

Higher Crude Runs

"Our prime objective always has been to obtain maximum production of petroleum products most urgently needed by the armed forces, and to assure an adequate supply of products essential to war industry and to the civilian economy," he explained. "We have heard it said that crude runs were restricted arbitrarily. However, all possible information and advice has been obtained previous to the taking of action, and the measures it has been necessary to take, such as restriction of crude runs in District 2, have been rescinded just as soon as possible. It has been necessary to adopt different policies in different areas of the country, reflecting variations in the situations of each. But,

"DEAD DUCK"

Whether Petroleum Reserves Corporation was in or out of the oil business was the subject of considerable discussion in Washington last week, with Senator E. H. Moore of Oklahoma saying it was out and PRC spokesmen declaring it was not.

The Oklahoma Senator who, with Senator Ralph O. Brewster of Maine, introduced a resolution to block PRC's Saudi Arabia pipe line deal, described the project as a "dead duck" and said "there probably will be permitted a cooling-off period purely as a face-saving gesture before any announcement is made that the Arabian deal got too hot."

At PRC, it was said the line is "the same as it always has been," but it was admitted that alternatives to government construction are being considered, both in the line of private financing and a Reconstruction Finance Corporation loan.

looking back over the last three years, we feel it justifiable to say that the war program has benefited by the utilization of the crude supplies, transportation facilities and refining capacity which have been made available, and that the measures taken, while necessarily worded in restrictive terms, have actually resulted in higher crude runs than could have prevailed otherwise."

In discussing Directive 59, PAO-1 and PAO-5, designed to provide equitable distribution of supplies in District 1, Davies disclosed that in view of the increasing quantities of products now being taken for military use from other districts and the resulting problem of meeting essential civilian requirements in those areas, PAW is considering a revision and extension of PAO-1 to be effective in any district where its need is indicated.

Following the conclusion of its examination of PAW officials May 19, the subcommittee went into executive session to hear representatives of Pacific War Emergency Pipe Lines, whose project for a crude line from Monahans, Texas, to Beaumont, California, was rejected by PAW.

Failing to obtain any support from PAW, which would be necessary before the WPB would authorize the use of the steel required, proponents of the line are understood to have contacted members of the subcommittee with a view of enlisting their efforts to forcing the Ickes agency to reverse its position.

New High Level for Oil Production Indicated by PAW Figure for June

A new high level of production will be attained under PAW certifications calling for a daily output of 4,879,100 barrels of petroleum liquids in June, of which 4,577,600 barrels will be oil and 301,500 barrels other petroleum liquids.

The total daily output will be 60,600 barrels above that certified for the current month — 4,818,500 barrels of which 4,919,700 barrels was crude oil, and 667,300 barrels above the June, 1943, output of 4,210,800 barrels daily.

Although production next month will be at an all-time high, PAW officials warned that none of the increased output will go into civilian channels, because of the increasingly heavy demands of the military. The additional production, Deputy Administrator Ralph K. Davies said, was made possible by better utilization of local refinery facilities through the expanded construction program and the availability of increased transportation to carry crude oil into other districts.

June production in Districts 1 and 2 will be slightly under that of the current month, and the bulk of the over-all increase will be in District 3, all but 2600 barrels of it in Texas, the result of increased refinery runs and improved transportation to other areas.

Crude oil production rates for the various states, as compared with May certifications, were set by PAW as follows:

District 1: New York, 13,400 barrels, down 200 barrels; Pennsylvania, 42,000 barrels, unchanged; West Virginia, 900 barrels, unchanged.

District 2: Illinois, 220,000 barrels, unchanged; Indiana, 14,000 barrels, unchanged; Kansas, 274,000 barrels, down 11,000 barrels; Kentucky, 23,000 barrels, unchanged; Michigan, 51,000 barrels, down 3000 barrels; Nebraska, 1000 barrels, up 100 barrels; Ohio, 9200 barrels, unchanged; Oklahoma, 322,000 barrels, down, 8000 barrels.

District 3: Arkansas, 78,000 barrels, up 1300 barrels; Louisiana, 350,000 barrels, unchanged; Mississippi, 42,000 barrels, down 1000 barrels; New Mexico, 113,000 barrels, up 1300 barrels; Texas, 2,031,000 barrels, up 59,000 barrels.

District 4: Colorado, 7400 barrels, up 200 barrels; Montana, 24,400 barrels, unchanged; Wyoming, 94,000 barrels, unchanged.

District 5: California, 249,200 barrels, up, 9200 barrels.

Production rates for natural gasoline and condensate were unchanged in all states except Texas, and California, where they were increased 1000 and 1700 barrels, respectively, the individual rates being as follows:

Pennsylvania, 1300 barrels; West Virginia, 6800 barrels; Illinois, 13,500 barrels; Kansas, 5800 barrels; Kentucky, 2700 barrels; Michigan, 300 barrels; Ohio 500 barrels; Oklahoma, 28,000 barrels; Arkansas, 5000 barrels; Louisiana, 45,000 barrels; New Mexico, 4900 barrels; Texas 132,00 barrels; Montana, 300 barrels; Wyoming, 7200 barrels; California, 48,200 barrels.

Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED May 20	May 13
Alabama	100	50
Arkansas	79,700	79,900
California	834,000	835,100
Colorado	8,000	8,400
Illinois	214,300	194,200
Indiana	14,000	14,550
Kansas	284,200	278,000
Kentucky	22,600	22,600
Louisiana	358,400	358,400
North Louisiana	75,150	75,100
South Louisiana	283,250	283,300
Michigan	52,550	51,950
Mississippi	42,000	42,100
Missouri	100	100
Montana	22,580	20,600
Nebraska	1,050	1,000
New Mexico	112,200	112,000
New York	14,300	13,800
Ohio	8,150	8,100
Oklahoma	333,900	333,500
Pennsylvania	41,400	40,900
Tennessee	30	30
Texas	1,995,550	1,995,150
Upper Gulf Coast	519,900	519,750
East Texas Field	364,000	364,050
Rest of Eastern Texas	137,000	136,900
Lower Gulf Coast	210,900	210,700
Southwest Texas	76,550	76,500
South Central Texas	19,800	19,800
West Texas	429,050	429,300
North Texas	147,250	147,100
Panhandle	91,100	91,050
West Virginia	8,700	8,600
Wyoming	92,000	91,150
Total United States	4,539,840	4,510,160

Texas Allowable for June 18,053 Barrels over PAW

The Texas Railroad Commission has set an allowable of 2,181,053 barrels per day for June, 18,053 barrels higher than the PAW recommendation of 2,163,000 barrels. Net allowable of 2,187,160 barrels of crude oil daily is 18,874 barrels higher than the allowance in effect on May 13. However, it estimated that under-production would amount to 7 percent, or 153,101 barrels.

In addition to the net oil allowance of 2,034,059 barrels, the commission estimated 146,994 barrels of distillate and natural gasoline would be produced daily.

PAW had asked for 442,000 barrels of sour oil. The West Texas allowable on May 13, was 439,515 barrels, and this was increased to 454,329 barrels. The increase was assigned to 21 fields which will move oil into the two lines recently completed from that area.

Fields generally will be allowed to produce 23 days, and the Panhandle 27 days. East Texas field will be allowed to produce 22 days, which will mean a net allowable for June of 366,762 barrels per calendar day, as compared with a calendar-day allowable of 370,890 for May.

At the statewide hearing upon which the June order was based, the commission had before it request from PAW at Washington for a daily output in June of 2,163,000 barrels, of which 2,031,000 barrels was to be crude oil and the balance other liquids. Oil production requested was an increase of 59,000 barrels daily over the May allocation. Sour crude from West Texas suggested by PAW was 442,000 barrels.

Purchasers heard at the hearing named their requirements at 2,227,388 barrels daily, an increase of 34,290 barrels over requests for the previous month. The biggest boost in nominations was 25,866 barrels in West Texas, which would increase that area to 439,905 barrels daily. Gulf Coast buyers indicated need for an increase of 6984 barrels, and Southwest Texas 3145 barrels.

Bryan Payne, East Texas operator, requested that the Commission hold in abeyance its new East Texas rule entered at the last statewide hearing, which forbids assignments as bonus oil of an amount larger than the well which was being relieved could produce. He explained that new well-status reports are to be received July 1; and that there is a difference between the volume of water metered at the wells and the amount which is calculated from old well-status reports. He said that this discrepancy would disappear when the new reports are filed and, no difficulty would be encountered thereafter.

Continental Oil Company asked permission to produce 132 barrels per well daily in the Slick-Wilcox field, Goliad County. The commission heard application of Gulf Oil Corporation for a new proration order in the McElroy field. Its attorneys said that a decision in a suit attacking the existing order had been made May 1, and they asked that a new order be entered providing for substantial compliances with this decision. The decree established a production ratio of 80 percent for the McElroy ranch, 15 percent for Church Fields and 5 percent for the McClintic field. Commissioners indicated they would approximate this ratio as soon as possible.

Exploration Completions Continue at Active Rate

April figures show 75 wells per week on average with 17.3 percent productive; results fairly satisfactory

By L. J. LOGAN, Associate Editor

APRIL brought a continuation of comparatively active exploratory drilling in the United States, and there was a normal proportion of successful tests among those completed. But the productive wells included nothing spectacular. The record for the month was a typical one of much work and expense, rewarded in the end only by limited encouragement, with even the successful tests predominantly inconclusive and requiring further exploration to determine their value.

The month's results attested the fact that it has become exceedingly difficult to discover first-class oil fields; that much of any needed building up of new oil-producing capacity must be achieved by slow and persistent widening of established fields and finding of new, deeper pays within those fields, while operators are only rarely rewarded by strikes of definitely superior potentialities. For several years, replacement of oil reserves has had to be accomplished in this laborious way, in contrast with the earlier successive waves of important discoveries attending introduction of the several methods of geophysical prospecting.

"Reasonably Satisfactory"

Accordingly, this year's record in exploration probably should be adjudged as reasonably satisfactory. April brought additions to reserves which, on their face, were only run-of-the-mill, in spite of a comparatively large volume of exploratory drilling. But earlier months afforded several unusually promising discoveries, notably in Mississippi and Alabama and also including apparently important additions to reserves in California, Wyoming, West Texas, the Texas-Louisiana Gulf Coast, and some other districts.

Nevertheless, the industry must guard against becoming over-optimistic on reserves through such discoveries as Heidelberg in Mississippi. They are the exception and the consistent, month-to-month finding of new oil to replace that used up as the months unfold still must be done the plodding way, which involves development of comparatively small reserves in each of many areas.

During April, new pay zones in established fields and important extensions of the previously discovered fields accounted for a large proportion of the

■ CONTINUED ON PAGE 16

Summary of Results of Exploratory Drilling

ITEM	Mar., 1944	April, 1944	JANUARY-APRIL 1943	JANUARY-APRIL 1944	JANUARY-APRIL Percent Diff.
Oil Discoveries	41	35	105	144	+ 37.1
New Fields	26	20	65	89	+ 36.9
New Pays	15	15	40	55	+ 37.5
Distillate Discoveries	1	....	8	6	— 25.0
New Fields	1	....	8	5	— 37.5
New Pays	....	....	....	1	†
Gas Discoveries	10	9	14	32	+128.6
New Fields	7	8	12	26	+116.7
New Pays	3	1	2	6	+200.0
Total Discoveries	52	44	127	182	+ 43.3
Extensions to Fields	11	23	43	47	+ 9.3
Oil Fields	9	16	40	35	— 12.5
Distillate Fields	1	6	1	5	+400.0
Gas Fields	1	1	2	7	+250.0
*Total Prod. Tests	63	67	170	229	+ 34.7
†Dry Holes	217	310	836	1035	+ 23.8
(Weekly Average)	53	62	49	58	+ 18.4
Wildcats	207	295	807	1009	+ 25.0
New Pays	....	1	....	1	†
Outposts	10	14	29	25	— 13.8
†Total Expl'tory Tests	280	377	1006	1264	+ 25.6
(Weekly Average)	70	75	59	70	+ 18.6
Percent Prod. (Weekly Avge.)	24.3	17.3	16.9	17.1	.....
Percent Dry (Weekly Avge.)	75.7	82.7	83.1	82.9	.....

* Data for calendar month.

† Dry hole completions are from weekly reports and totals represent completions for 5 weeks in April, 1944; 4 weeks in March, 1944; 18 weeks in Jan.-April, 1944, and 17 weeks in Jan.-April, 1943.

Results of Exploratory Drilling in April and First Four Months

	APRIL, 1944															FIRST FOUR MONTHS, 1944															
	Productive Tests										Unproductive Tests				Total Exploratory Tests	Productive Tests										Unproductive Tests				Total Exploratory Tests	
	New Fields			New Pays			Extensions			Total Productive						New Fields			New Pays			Extensions			Total Productive				Total Dry			
	Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.		Wildcats	New Pays	Outposts	Total Dry		Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.	4 Mo. 1944	4 Mo. 1943	Wildcats	New Pays	Outposts	4 Mo. 1944	4 Mo. 1943	4 Mo. 1944	4 Mo. 1943
Alabama	....	....	....	....	....	....	....	....	....	....	3	....	....	3	3	1	....	....	....	....	....	....	....	....	1	....	4	....	....	4	....	5	....
Arizona	....	....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	3	....	....	3	....	3	....
Arkansas	1	....	....	....	....	....	3	....	....	4	7	....	....	7	11	1	....	....	1	....	....	4	....	....	6	7	15	....	....	15	16	21	23
California	....	1	....	1	....	....	2	1	....	5	34	....	....	34	39	5	5	....	3	....	....	2	1	....	16	7	82	....	....	82	54	98	61
Colorado	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	3	....	....	3	1	4	1
Georgia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	1	1	1
Illinois	....	....	....	3	....	....	1	....	....	4	22	....	....	22	26	2	....	....	17	....	....	5	....	....	24	32	96	....	....	96	112	120	144
Indiana	....	....	....	....	....	....	1	....	....	1	4	....	....	4	5	2	....	....	....	....	....	2	....	....	4	5	15	....	....	15	29	19	34
Iowa	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	2
Kansas	4	2	....	....	....	....	....	....	....	6	33	....	2	35	41	18	3	....	....	....	....	2	....	....	23	17	135	....	6	141	116	164	133
Kentucky	1	....	....	....	....	....	....	....	....	1	15	....	....	15	16	3	....	....	4	....	....	....	....	....	7	2	39	....	....	39	12	46	14
Louisiana	2	....	....	1	....	....	....	....	....	3	16	....	4	20	23	2	1	1	5	1	....	2	....	1	13	11	39	....	8	47	27	60	38
North	....	....	....	....	....	....	....	....	....	....	9	....	2	11	11	....	....	....	....	1	....	1	....	1	3	2	24	....	5	29	20	32	22
South	2	....	....	1	....	....	....	....	....	3	7	....	2	9	12	2	1	1	5	....	....	1	....	....	10	9	15	....	3	18	7	28	16
Michigan	....	....	....	....	....	....	....	....	....	....	17	1	....	18	18	4	....	....	....	....	....	....	....	....	4	9	66	1	....	67	50	71	59
Mississippi	....	....	....	....	....	....	....	....	....	....	4	....	....	4	4	1	....	....	....	....	....	....	....	....	1	1	17	....	....	17	17	18	18
Missouri	....	....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	1	1	2
Montana	....	....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	....	....	....	....	....	1	....	....	1	1	4	....	....	4	1	5	2
Nebraska	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	4	16	4	16
New Mexico	....	1	....	1	....	....	....	....	....	2	5	....	....	5	7	....	1	....	1	....	....	....	....	....	2	....	19	....	....	19	22	21	22
Ohio	....	2	....	....	....	....	....	3	....	5	4	....	....	4	9	1	8	....	....	....	....	....	4	....	13	....	18	....	1	19	....	32	....
Oklahoma	3	....	....	1	....	....	....	....	....	4	24	....	1	25	29	10	2	....	1	1	....	1	....	....	15	19	61	....	2	63	92	78	111
Tennessee	....	....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	1	....
Texas	8	2	....	7	1	....	9	2	1	30	102	....	7	109	139	36	6	3	21	4	1	16	2	4	93	55	381	....	8	389	264	482	319
E. T. Bor.	....	....	....	....	....	....	....	1	....	1	....	....	....	....	1	....	....	....	....	....	....	....	1	1	2	....	2	....	....	2	1	4	1
Rest of E. T.	....	....	....	1	....	....	....	....	....	1	13	....	....	13	14	3	....	....	3	....	....	....	....	....	6	3	46	....	....	46	22	52	25
North Texas	3	....	....	2	....	....	1	....	....	6	24	....	....	24	30	9	....	....	5	1	....	1	....	....	16	11	86	....	....	86	64	102	75
W. Central	1	....	....	....	....	....	....	....	....	1	7	....	....	7	8	5	....	....	1	1	....	....	....	....	7	6	35	....	....	35	27	42	33
West Texas	1	....	....	2	....	....	3	....	....	6	20	....	2	22	28	5	2	....	3	....	....	5	....	....	15	3	57	....	2	59	20	74	23
Panhandle	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	2	1	2	1
Upper Coast	1	1	....	1	....	....	....	1	....	4	15	....	....	15	19	3	1	2	1	....	....	....	1	1	9	10	45	....	....	45	17	54	27
Lower Coast	....	1	....	....	....	....	1	....	....	2	10	....	3	13	15	9	2	1	6	1	1	3	....	1	24	15	48	....	4	52	37	76	52
Southwest	2	....	....	1	1	....	4	....	....	8	9	....	2	11	19	2	1	....	2	1	....	7	....	....	13	7	43	....	2	45	53	58	60
S. Central	....	....	....	....	....	....	....	....	1	1	4	....	....	4	5	....	....	....	....	....	....	....	....	1	1	....	17	....	....	17	22	18	22
Wyoming	1	....	....	1	....	....	....	....	....	2	1	....	....	1	3	2	....	....	3	....	....	....	....	....	5	3	5	....	....	5	3	10	6
Total U. S.	20	8	....	15	1	....	16	6	1	67	295	1	14	310	377	89	26	5	55	6	1	35	7	5	229	170	1009	1	25	1035	836	1264	1006

New Oil and Gas Fields and New Pay Horizons Discovered in the United States in April, 1944

Also Important Extensions to Established Fields

County	Field	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production Method and Choke	Gravity of Oil	[3]Structure; [4]Method of Discovery	Tentative Evaluation of Discovery or Extension
		ARKANSAS—New Oil Field									
Union	Hibank	L. D. Manley's J. C. Woods 1, ne sw sw 25-18-15	.....	4- 5-44	2165	-2165	Nacatoch sd, U. Cre.	P 10	....	.....	Small importance.
		ARKANSAS—Oil Field Extensions									
Columbia	Atlanta	Durbin Bond's J. L. Hendricks 1, sw se 13-18-19	.....	4- -44	8182	7975-7995	Reynolds li, Jur.	F 240; A"	45.4	.....	¼ mi e extension.
Columbia	Atlanta	Tide Water's J. S. O'Bier 1, se ne 18-18-19	.....	4-19-44	8259	8252-8255	Reynolds li, Jur.	F 198; ½"	44.4	.....	Important; 2 mi w extension.
Miller	Fouke	Carter's O. G. Collins 1, se ne sw 32-16-26	4- 6-44	4-23-44	3614	3562-3580	Paluxy sd, L. Cre.	F 460; ½"	37.0	.....	½ mi n exten. of narrow e to w fld. Encouraging but not of major importance.
		CALIFORNIA—New Oil Pay									
Ventura	San Miguelito	Continental's Grubb 31, nw sw se, 25-3n-1w	1-17-44	4-11-44	8259	7225-7706	Grubb 31, sd. Plio.	F 1558; two 1"	3015	Flt A; geol.	Areal extent conjectural.
		CALIFORNIA—Oil Field Extensions									
Kern	Cymric	Superior's F&W 1, se nw sw 23-29s-21e	3- 4-44	3-31-44	1516	1421-1452	2nd Tar sd, Pleis.	P 95	13.6	An; geol	1 mi nw exten. Indicated area small (200 ac?) and est yield per ac. low.
Orange	Coyote	Barnsdall's Sunny Hills 1, sw nw nw 22-3s-10w	12-14-43	4-25-44	6784	6033-6355	Sunny Hills sd, Mio.	P 135	24.0	An; geol, gp.	Not known if new fld or extnsn of E or W Coyote. Geology complex and only short stepping out in drlg justified.
		CALIFORNIA—New Gas Field									
Solano	Suisun	Standard's Honker 1A, ne ne nw 25-3n-1w, Sacramento Riv. delta	6-19-43	4- 7-44	7297	7190-7220 7275-7297	.....	F 3.2 mln.; 1/64"	Gas	An; gp.	Yield from first well not impressive.
		CALIFORNIA—Gas Field Extension									
Sacramento	Rio Vista	Standard's Terschuren Unit 2, 28-4n-3e	3-28-44	4-15-44	3910	3849-3909	Green sd, Eoc.	F 7.4 mcf; ½"	Gas	Dome; geol.	½ mi ne exten to one of greatest U. S. flds.
		ILLINOIS—Oil Field Extension									
Wayne	Clay City	Rudy's Wilson Flexter 1, nw se nw 3-1n-7e	2-25-44	4- 4-44	3008	3003-3022	Aux Vases sd, Miss.	P 150	....	.....	2,000 ft sw extension.
		ILLINOIS—New Oil Pays									
Edwards	Albion Consol.	Superior Oil's Willet 2, se se sw	2-12-44	4-11-44	3123	2990-3123	Renault li, Miss.	P 125	....	.....	Also produces fr Biehl, Waltersburg. Superior comp. Blood 1 same day as 16-bbl pumper in Renault, Aux Vases, McClosky.
Wayne	Geff	Pure Oil's Molt "A" 1, sw sw ne 31-1n-8e	3-19-44	4-18-44	3158	3089-3158	Rosiclare sd. Miss.	P 110	....	.....	2 mi n ne of Geff discov. well. A well dry in McClosky is ¾ mi n ne of discov. well so this "extension" appears to be separated.
Wayne	Mt. Erie	Gulf's Wynona 1, sw nw 12-1s-8e	1-19-44	5- 2-44	3114	3056-3068	Levias li, Miss.	P 132	....	.....	Pay 4 ft thick, (also produces fr McClosky). Most wells in pool penetrated Levias without finding oil in it.
		INDIANA—Oil Field Extension									
Posey	Upton	Bennett Bros.'s Irene Schultz 1, se sw se sec 29-T6S-R14W, Posey Co.	1-22-44	4-12-44	2869	2781-2801	Aux Vases sd, Miss.	P 48	....	.....	¾ mi ne extension.
		KANSAS—New Oil Fields									
Pratt	.....	Lion's Andrews 1, sec 24-29s-14w	.....	4-10-44	4517	4405-4410	Simpson sd, Ord.	F 731; ½"	....	An; sub, Seis	Considered important strike. 15 mi sw Chitwood pool.
Russell	Beisel	Bridgeport Oil Co. Inc.'s Beisel 1, swc nw 15-14s-12w	.....	4-14-44	3281	3265-3268	Arbuckle li, Ord.	P 81	....	Str tr; geol.	Apparently small field. 2 mi e Mahoney pool.
Stafford	McCandless	Atlantic's McCandless 1, swc se 30-25s-13w	.....	4- 8-44	4323	4251-4267	Simpson sd, Ord.	P 734	37.0	An Str tr; gp.	More drilling due. 3 mi s Leesburgh pool.
Stafford	Syms	Stanolind's Syms 1, nw ne 20-21s-12w	.....	4- 5-44	3594	3587-3591	Arbuckle li, Ord.	P 192	....	Small D; seis	Small pool; may cover 240 ac. 10 mi ne St. John.
		KANSAS—New Gas Fields									
Barber	Skinner, NW	J. M. Huber's Skinner 1, nw nw 17-31s-14w, 4 mi se Sun city	.....	4- 8-44	4628	4356-4430	Viola li, Ord.	F 34.6 mln.	Gas	sur, cd	Important; may cover 5 or more sections.
Harvey	NE Burrton	Rock Sand & Gravel's Woods 1, nwc se 10-23s-3w	.....	4- 7-44	3376	3270-3278	Miss. li, Miss.	F 2 mln.	Gas	Dome; sub.	Small field. 3½ mi ne Burrton.
		KENTUCKY—New Oil Fields									
Daviess	St. Rapheal Ch.	Miller-Schiarella's Simmons 1, 20-O-27	.....	4- -44	1845	1842-1845	Aux Vases sd, Miss.	P 25	....	.....	5 mi s Birk City pool, which opened new Kentucky play.
Clinton	.....	Irvine J. Vawter's Dickens Bros. 1, Ky-Tenn. border area	.....	2- 44	190	- 190	Corder li	F 350	....	An; dr.	New pool on Deada anticline, fr which others have produced since 1939.
		SOUTH LOUISIANA—New Oil Fields									
Beauregard	Gordon	Union of Cal.'s Edgewood L&L Co. 1, 537 ft fr w 2869 ft fr sl sect 25-6s-10w	1-24-44	3- 9-44	6900	6767-6770	L'wr Frio sd, Olig.	F 31.78; 1/64"	62.0	Fold, prob Flt; seis	On upper fringe of coastal belt, in general area of several newer fields of minimum of 1,000 oil-acres in Cockfield, Wilcox. This Lwr Frio pay could be important.
St. Landry	Cankton	Sun's E. M. Bogani B-1, 2356.2 s 2332.5 s 60 deg 35 mins e fr nwc 48-8s-4e.	.....	4-17-44	10512	9667-9690	Hackberry sd, Olig.	F 470; 9/64"	38.0	Flt; sub, gp.	Should add 3 to 5 mln bbls reserves. Old shallow wells did not reach productive strata. Good sands, 28 ft porosity, at least 40 proven ac.
		SOUTH LOUISIANA—New Oil Pay									
Iberville	Rosedale	Sugarfield Oil Co.'s Slack Bros. 1, start sec sec. 75 go 2669.1 n 16 deg w alg wl of sec. 107 th 649 ely at rs in 107-7s-10e.	2- 5-44	4- 5-44	10296	10134-10138	Mio sd, Mio.	F 172; ½"	47.9	Prob S.D.; seis.	Probable area of new pay 600+ ac.
		NEW MEXICO—New Gas Field									
Lea	.....	R. Olsen-Atlantic's P. J. Langlie 1, c se se 11-25s-37e, ½ mi e of Permian prod. in Langlie fld.	6-30-42	4- 4-44	9592	4830-4880; 4707-4804	Yeso (Clear Fork) li, Perm.	2.2 mln.	Gas; dist.	An; gp.	Not important as gasser, but 1st Pre-Permian test for county, revealing Devonian, Silurian and 3 Ordovician zones as potential pays above granite at 9555-9592 ft.
		NEW MEXICO—New Oil Pay									
Eddy	Turkey Track	Robt. E. McKee & C. M. Bassett's State Spencer 1, c nw nw sec 3-19s-29e, 1½ mi nw of 2600-ft producer.	12- 3-43	4 -10-44	3157	2055-2162	Queen sd, Perm.	F 15; 2"	37.4	An; geol.	Not important; pool's discovery pay not present.
		OHIO—New Gas Fields									
Ashland	.....	Glenn Harmon's Charles Beard 1, Lot 69, Sullivan twp.	.....	4- -44	2593	2586-2593	.....	245 mcf	Gas	.....	⅜ mi w of partly depltd pool in n end Sullivan twp. Test to be made in lime before more drlg in area.
Medina	.....	Ohio Fuel's E. J. Yost 1, Lot 22, Litchfield twp.	.....	4- -44	2718	2710-2717	Clinton	6.5 mln.	Gas	.....	4th gas discov in Lorain-Medina area since Wellington pool.
		OHIO—Gas Field Extensions									
Ashland	Lake	Sheridan-Hogue's Josephine Ecki 1, sec 21, Lake twp.	.....	4- -44	2850	2840-2850	Clinton	1.6 mln.	Gas	.....	Extends pool ¾ mi sw.
Lorain	Middle Wellington	Ohio Fuel Gas Co.'s Castle 1, lot 10, Wellington twp.	.....	4- -44	2372	2337-2342; 2367-2372	.....	338 mcf; 792 mcf.	Gas; Gas	.....	Extends Pool ½ mi sw.
Lorain	Penfield	Pittsburgh O & G Co, Gamberson tr in lot 31	.....	4- -44	2527	2510-2527	.....	303 mcf	Gas	.....	Extends pool ½ mi ne.

		OKLAHOMA—New Oil Fields										
Creek		Sneed's Eason 1, sw nw se 12-14n-10e	.....	4- 4-44	2540	2448-2514	Gilcreaze sd, Penn.	P 90	30.4	Str trp; gp.	Small pool. 1½ mi s Wilcox pool.
Logan	E. Crescent	Atlantic's Kerfoot 1, se se ne 31-18n-3w, 4 mi e Lovell dist	.....	4- 5-44	6323	6270-6276	Wilcox sd, Ord.	P 95	40.0	An; seis.	On sub-surface co-relation, looks poor; seis data indicate fld may be fairly large.
Pottawatomie	.....	Stanolind's Werrell 1, nw nw nw 9-7n-3e	1-17-44	4-21-44	4887	4540-4560	Hunton li, Devo.	F 346; 3/8"	....	Dome; seis.	Undetermined value. 1 mi w St Louis dist.
		OKLAHOMA—New Oil Pay										
Payne	NE Mahan	Sunray's McKenzie 1, sw sw se 13-18n-3e	.....	4-18-44	4160	2305-2312	Layton sd, Penn.	F 240; 1/8"	44.0	Ant; sub.	Pay sand 50-75 ft thick; important discovery.
		EAST TEXAS BORDER—Gas Field Extension										
Panola	Carthage	W. C. Feazel-N. V. Kinsey's Ross 1, Moorman sur, sw Carthage 2¼ mi fr prod in Jordan 1.	2-18-44	4-18-44	6472	5960-6052 6290-6380	Low Pettit li, L. Cre. Travis Peak sd, L. Cre.	F 4 mln, gas F 50 mln, gas	65.0 65.0	....	Important; 2¼ mi extension of gas-dist. fld. Heavy saturation of dist. from both zones; 65 grav.
		EAST TEXAS—New Oil Pay										
Limestone	Groesbeck	Zephyr Oil Co.'s Nussbaum-Scharff 1, 700 ft fr m/s/sw, 300 ft fr m/s/se lines 76-ac tr and S. H. Bates sur, amidst shallow gas, 3 mi n by w Barron pool, nearest deep area.	12- 2-43	4-17-44	5515	4734-4788	Rodessa li, L. Cre.	P 39; 24 wtr.	41.4	Flt An; geol.	Not important. Prod. is fr "stray" li zone betw anhydrite beds, a pay heretofore confined to discovery well for Opelika deep fld, Henderson Co.
		NORTH TEXAS—New Oil Fields										
Clay	.....	H. F. Wilcox O & G-Continental-Skelly's G. W. Scaling 1, 330 ft snl, 990 ft wel J. Gamble sur A-168, 3½ mi n by e Watson fld, nearest prod. and same zone.	11-28-43	4-10-44	6160	5554-5570	Basal Bend li, Penn	F 965; ½"	41.0	An; geol.	Single well reserve 80,000-120,000 bbls. Previous Basal Bend flds in dist. declined sharply and small in area; Ellenburger 6037-6160 ft.
Young	.....	Kerlyn Oil Co.-Phillips' W. W. Cope 1, 330 ft out of swc of sec. 1475, TE&L Co. sur, 3¾ mi w by n Garvey pool, nearest deep prod.	3- 4-44	4-10-44	4436	4418-4428 4385-4397	Bend li, Penn.	F 615; 3/8"	43.7	An; geop.	Single well reserve 120,000-160,000 bbls. Unusually productive natural well for Bend. Previous Bend strikes in area failed to embrace much area.
Young	Wells	Standard of Tex.-Hanlon & Buchanan's R. T. Wells 1, 495 ft snl and 1400 ft ewl sec. 738, TE&L Co. sur, 2 mi e by s of Holbert pool's 3800-ft Bend, nearest prod.	5-23-43	3-20-44	4851	3574-3579	Strawn sd, Penn.	P 7	40.0	An; geol.	Not important. Discovery well temp. aband 8-16-43 due to small yield, then put on pump after owners decided to resume explorations. Mississippian 4662-4851 ft.
		NORTH TEXAS—New Oil Pays										
Archer	Cooper-Parkey	Geo. W. Cooper's J. R. Parkey-"Fain-Parkey" 1, se nw nw S.P. Ry. sec. 2, A-1233.	2-11-44	4- 1-44	4347	3902-3939	Strawn sd, Penn.	F 132; 13/64"	44.0	An; geol.	Single well reserve 100,000-120,000 bbls. May involve stray sand lense and not embrace much area.
Wichita	Davidson	Fain-McGaha's C. R. Krizan 1, 495 ft out swc blk 43, Cherokee CSL sur., ne offset to Ellenburger discovery.	1-14-44	4- 5-44	5535	4816-4851	Basal Strawn sd, Penn.	F 336; 29/64"	43.0	An; geol.	Single well reserve of 80,000-120,000 bbls. Rated as stray sand. Ellenburger 5330-5535 ft.
		NORTH TEXAS—Oil Field Extension										
Young	Sewell	Thos. D. Humphrey's M. K. Graham 1, 1738 ft fr m/n/n and 660 ft fr m/e/w lines G. W. Robinson sur, A-1820.	3-15-44	4-10-44	4160	3995-4003	Bend li, Penn.	F 920; 1"	41.6	An; geol.	Single well reserve 160,000-200,000 bbls. Promising pays passed up in Canyon and Strawn.
		WEST CENTRAL TEXAS—New Oil Field										
Coleman	.....	Chas. P. Franchot, Tr.,-W. E. Ball-E. L. Hanson's H. C. Michie 1, 1980 ft snl and 660 ft wel J. L. Luckenback sur No. 258, A-470.	.....	3-22-44	3325	3313-3325	Ranger li, Penn.	F 14; 2"	42.0	An; geol.	Not important. 1½ mi s nearest oil prod.
		WEST TEXAS—New Oil Field										
Hockley	Yellow House	Stanolind's Tom Cobb 1, 660 ft out sec Labor 103-e, League 75, Haskell CSL, 14½ mi n Slaughter fld.	12-26-43	4-18-44	4685	4596-4663	San Andres li, Perm.	P 61; 19 wtr.	27.0	An; geol.	Water likely to exhaust under extended pumping. Likely to embrace large producing area.
		WEST TEXAS—New Oil Pays										
Crane	Sand Hills	Gulf's Waddell 43-E, 2010 ft nsl and 1980 ft wel PSL 20, blk B-26, 4 mi fr nearest Ordovician prod.	11-18-43	4-18-44	5881	5800-5835	Ellenburger dolo, Ord.	F 1275; 2"	35.6	Comp An; geol.	Single well reserve 200,000-240,000 bbls. 4th separate prodcg area for Ellenburger on expansive Sand Hills structure and within most prolific sect of Clear Fork (Tubb) zone. Ellenburger entered 5796 ft, first water 5860 ft.
Howard	Vincent	W. S. Guthrie-Coeden Pet. Corp.'s Mrs. P. Allen 2, e nw se L.N. Ry. Co. 57, blk 20, 1875 ft nw 4028-4096 ft Clear Fork discov. pumper.	6-24-43	4-16-44	6172	5451-5502	Basal Clear Fork li, Perm.	P 36	33.6	An; geol.	Not important, except to encourage deep prospecting of Lower Permian in east part Permian Basin.
		WEST TEXAS—Oil Field Extensions										
Andrews	Fullerton	Stanolind-Texas Co.'s Logsdon 1-c se se PSL 5, blk A-32, 1⅛ mi nw prod and on direct strike w Union fld.	12-28-43	4-22-44	7220	6829-7220	Wichita-Albany (Clear Fork) li, Perm.	F 433; ¼"	40.8	An; geol.	On same prod contour as nearest Fullerton and Union producers, and closes 4½-mi gap betw same, paving way for drlg over 100 wells on intermediate acreage.
Cochran	NW. Slaughter	E. Constantin Jr.'s G. W. Moore 1, 440 ft out of swc Labor 9, League 64, Midland CSL sur, 2 mi n by e nearest prod.	10-15-43	3-31-44	4952	4868-4888 4755-4770 4900-4910	San Andres li, Perm.	P 253	....	An; geol.	Excessive vol sulphur water with oil (67%) discounts economic value; pay is 50 ft lower, subsea, than nearest producers.
Crockett	Shannon	Sohio Pet. Co.'s Shannon Est. 1, c sw se GC&SF Ry. 24, blk 1	10-29-43	4- 9-44	2218	2184-2215	Grayburg li, Perm.	P 66; 72 wtr.	28.0	An; geol.	Not important; 1½ mi nw pool's discov. well.
		UPPER TEXAS GULF COAST—New Oil Field										
Jefferson	E. Fannett	Sun's Florence Wingate 1, 467 ft fr w 660 ft fr n 200-ac lse, 8½ mi se Fannett twst.	12-26-43	4- 5-44	9905	8665-8677	Frio sd, Olig.	F 69; ¼"	31.9	Flt, S. D.; seis.	Poor. Marginal. Not enough sand. Prod decrsed fr 69 to 11-16 bbls daily, due in part to sanding up.
		UPPER TEXAS GULF COAST—New Gas Field										
Brazos	Millican Area	Phillips' Wharton Weems 1, 2275 ft fr e 380 ft fr nl 289-ac lse, J. M. Barrera sur, 2 mi nw Millican.	1-26-44	4- 2-44	4998	3104-3107	Wilcox sd, Eoc.	F 5.5 mln.	Gas	S. D.; core dr.	Good gas prospects. Shut in; no market.
		UPPER TEXAS GULF COAST—New Oil Pay										
Polk	Livingston	Humble's C. B. Granbury 7, 5440.8-ac lse A. Viesca Gr A-77, sec. 2	.....	4- 1-44	7886	6972	Wilcox sd, Eoc.	F 668; ¼"	36.3	Prob. D; sur, sub.	2nd pay zone in Wilcox on w side fld. Important, as field covers 2,000 ac, prodcg fr Cockfield, Sparta, Wilcox. Has opened active Wilcox drlg campgn in area and along trend.
		UPPER TEXAS GULF COAST—Gas Field Extension										
Matagorda	N. Markham	Sun's D. H. Braman 9, 4620 ft se of nwl 5640 ft ne of swl 2903.9-ac lse on 40-ac unit.	12-14-43	2-26-44	8800	8330-8388	McDonald Frio sd, Olig.	.....	Gas	Salt ridg; gp.	2049 ft e ne No. 8 well.
		LOWER TEXAS GULF COAST—New Gas Field										
Nueces	Bluntzer Area	Hewitt & Dougherty's Selma Mumme 1, 467 ft fr se&nel lot 12, sh 8, Gallagher subdvn Bluntzer lands, Casa Blanca Gr., on 300-ac. lse compr lots 10, 11, 12.	12-12-43	4-20-44	6252	50-5555	Frio sd, Olig.	F	Gas	Fltd An; gp.	7 mi e se Orange Grove, 4½ mi w sw San Patricio, 5½ mi ne R. King fld.
		LOWER TEXAS GULF COAST—New Oil Pay and Extension										
Nueces	Riverside	Stanolind's Jennie A. Thompson 3, 543 ft fr nl 399 ft fr el blk 42, Nueces Co Winter Gdn subdvn, Joaquin Lopez de Herrera sur, on 2975-ac lse, 4¾ mi w nw Calallen.	12-16-43	3-30-44	7230	6297-6300	Frio sd, Olig.	F 154; 3/8"	38.7	Fltd	Riverside so far has produced only little oil and gas-distillate from other sands in Frio, 4900-7000 ft, over area of about 100 acres. This is deep test on east flank of fld, 4212 ft e ne Thompson 1, most ely gas well.
		SOUTHWEST TEXAS—New Oil Fields										
Duval	Rosita	American Repub. Corp.'s M. I. Richardson 1, 467 ft swl, 2216 ft fr nwl H&GN sur 18, 12 mi nw San Diego, 2½ mi w Bridewell fld, on 320-ac lse.	2-13-44	3- 8-44	3959	3945-3947	Pettus sd, Eoc.	F 162; ¼"	36.0	Flt; sub.	Good well, but fields in this area normally small. Dry hole previously drilled 2,000 ft e se.

• CONTINUED ON PAGE 16

New Oil and Gas Fields and New Pay Horizons Discovered in the United States in April, 1944

Also Important Extensions to Established Fields

■ CONTINUED FROM PAGE 15

County	Field	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production Method and Choke	Gravity of Oil	[3]Structure; [4]Method of Discovery	Tentative Evaluation of Discovery or Extension
McMullen..	.....	Edwin M. Jones' Harry Exsell 104, 990 ft fr sl, 330 ft fr el e½ tr, nw¼ sec 38 Exsell Rch subdvn, 10 mi sw Simmons City.	1-23-44	3-30-44	1790	1200-1212	Sd, Eoc.	P 44	20.5	Lense; sub.	Small, shallow producer. Sw Exsell fld.
		SOUTHWEST TEXAS—New Oil Pay									
Duval.....	Thos.Lockhart	Pan American's Eliz. Parr D-1, 330 ft fr s&el 80-ac D lse, 2254 ft fr wl, 1046 ft fr nl GH&H sur 115.	12-11-43	2-13-44	4910	3965-3970	"Thomas" sd, Eoc.	F 95; 1/4"	34.9	Fault: sub.	Fld has been prodcg fr Pettus sands around 5100 ft.
		SOUTHWEST TEXAS—Oil Field Extensions									
Duval.....	Sejita.....	Trinity Gas Corp.'s Eudoxio Guerra 1, 500 ft fr wl, 1250 ft fr nl 200-ac lse, San Pedro de Charch Redondo Gr.	.....	3- 3-44	5840	5754-5775	Hockley sd, Eoc.	F 11; 1/4"	44.8	Flt An; sub.	Extends field 2,000 ft s se of sw flank.
Jim Hogg..	Neuhaus.....	Texas Co.'s T. T. East B-1, 330 ft fr nl, 1575 ft fr wl 1228.6-ac lse B, 330 ft fr n&wl Rafael de la Pena Gr.	3- 2-44	4- 9-44	3462	3456-3458	Cockfield sd, Eoc.	P 33	45.0	Lense; sub.	Small producer; extends field ½ mi nw.
Jim Hogg..	Yaeger.....	Magnolia's Yaeger Hrs. 1, 330 ft fr n&el TTRR sur 226m 640-ac lse.	3-28-44	4-12-44	3740	3732-3740	Cockfield sd, Eoc.	P 42	36.2	An; cd, seis.	Extends fld ½ mi s sw; is ¼ mi s se of dry hole.
Starr.....	Garcia.....	Sun's Z. Solis B-1, 467 ft fr n&wl 63.62-ac. lse, being tr 31 porc 95, Juris of Camargo Gr, 934 ft e of J. V. de Solis 1, 2 mi n nw ext well R. Quintanilla porc 95.	.....	4-10-44	3781	3778-3779	Frio sd, Olig.	P 85; 3/4"	43.0	An; sur, sub.	May be small area of closure or anticlinal nose. Too far from previous prod. to appraise accurately.
		SOUTHWEST TEXAS—New Gas Pay and Extension									
Duval.....	Muralla.....	Taylor Ref. Co.'s J. M. Sepulveda 1-A, 7 mi wnw San Diego.....	1-17-43	12-13-43	4705	3862-3867	Pettus sd, Eoc.	F 16 mln.	Gas	Lense; trend	⅗ mi ne Muralla field, ½ mi nw Agua Prieta discov well.
		SOUTH CENTRAL TEXAS—Gas-Distillate Field Extension									
LaSalle....	Washburn....	Quintana Pet. Corp.'s So. Tex. Synd. 31, 3600 ft fr e, 4100 ft fr sl, T. W. House sur 61, or 1100 ft fr n, 1580 ft fr wl of sur.	2-12-44	4-20-44	5739	5092-5104	Wilcox sd, Eoc.	F 2.2 mln; ¼"	Gas-Dist.	Flt; gp.	½ mi n exten. Pretty good gas well; field should have, with this extension, about 10,000,000 bbls. reserves.
		WYOMING—New Oil Field									
Hot Springs	Wagonhound.	Brodrick & Gordon's E. J. Christenson 1, cnl ne se 6-44n-98w, w of Thermopolis. Wyo.	11-15-43	4- 8-44	4700	4360	Embar li, Perm.	S 497	....	An; sub.	Will add about 400,000 bbls. reserve to Wyoming black oil.
		WYOMING—New Oil Pay									
Big Horn..	Garland.....	General Pet. Corp.'s Howell 1, lot 63-56n-97w (aprx sw se sec 32)	10-25-43	3- 1-44	4436	4314-4436	Tensleep sd, Penn.	S 391	20.0	An; sur, seis.	Apparently important. A second Tensleep well, Ohio-Kinney Coastal's Unit 5, 3½ mi nw discovery, pumped 135 bbls day natrl at 4349-4485 ft. Garland is one of largest structures in Wyo, and aprx 2000 ac are embraced in devlpd area to Madison lime, which contains gas cap covering Tensleep. Whole structure, incl sevrl fault blk zones thru nw part and elsewhere on flanks of fld covers 15,000 ac.

[1] Character of producing formations abbreviated thus: li, limestone; sd, sandstone; sh, shale; ch, chalk; ser, serpentine; cgl, conglomerate. Ages of producing formations abbreviated as follows: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Miss, Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian.

[2] Barrels of oil per day (24 hr. rate), flowing (F), pumping (P), Swabbing (Sw), or bailing (B); or million of cubic feet of gas daily, open flow capacity; size of choke given in inches.

[3] Type structure abbreviated as follows: An, Anticline; D, dome; Fld, Fold or Folded; Flt, Fault or Faulted; M, Monocline; N, Nose; S D, Salt Dome; Str Tr, Stratigraphic Trap; Syn, Syncline; Ter, Terrace.

[4] Method of discovery abbreviated as follows: cd, core drilling; dr, drilling; geol, geology; gp, geophysics; grv, gravity meter; seis, seismograph; sub, Subsurface; sur, Surface Geology.

April Oil Exploration

■ CONTINUED FROM PAGE 13

new reserves of oil and gas developed; and among the individual strikes, some of the new pays and extensions appeared more important than most of the new fields found.

For example, many of the new field discoveries were eclipsed in apparent importance by extensions of the Atlanta field, Arkansas, 2 miles west and ¼ mile east, and by an outpost well which apparently links the Fullerton and Union oil fields of Andrews County, West Texas, paving the way for drilling over 100 oil wells in the 4½-mile interval between those fields.

New Pay in Wyoming

Another exploratory development of the month which appeared particularly important was the establishment of the Tensleep sand of the Pennsylvanian as a new pay for the large Garland structure, Big Horn County, Wyoming. That pay, found at 4314-4336 feet in its discovery well, also has proved productive in a second well, 3½ miles northwest, at 4349-4485 feet.

A potentially important new oil field was found in South Louisiana in Beauregard Parish, by Union Oil Company.

In the upper Mid-Continent there were two discoveries which were considered important, including the new Kansas field, in Pratt County, Section 24-29-14w, 15 miles southwest of the Chitwood pool, opened by Lion Oil Refining Company, and the new pay zone in Oklahoma in the Layton sand of the Pennsylvanian at 2300 feet in the Northeast Mehan field, Payne County.

In Panola County, East Texas, the Carthage distillate field was extended 2¼ miles. In California the Rio Vista gas field, Sacramento County, was extended ½ mile northeast. In Barber County, Kansas, was discovered the Skinner Northwest, gas field, an important strike that may result in a gas-producing area of 5 sections or more.

April Exploratory Completions

Both in April and the first 4 months of this year, exploratory drilling in the United States has been maintained above last year's trend, although somewhat short of the goals set up by the government. Total exploratory completions of all classes averaged 75 per week in April or at the rate of nearly 4000 per year, compared with actual of about 3600 last year. Of the April completions, 17.3 percent were productive, having found new oil, gas, or distillate fields or pays, or having provided major extensions to developed fields. That was about a normal proportion of successful tests.

In the first 4 months of this year, total exploratory well completions averaged 70 per week, an increase of 18.6 percent over the 59 weekly in the corresponding months last year. That 18.6 percent increase in exploratory drilling closely approximated although it did not quite equal the 20.7 percent increase for the period in all United States completions. Of the exploratory wells completed in the first 4 months of this year, 17.1 percent were productive, indicating about the same degree of success as in the like months last year.

What's Behind the Trade Mark?
QUALITY
TRADE MARK
YOUNGSTOWN
SERVICE
The Wildcat Spirit
THE American wildcatter is an international institution.
In Arabia, in Latin America, in deserts and mountains, in tropics and arctic, he has been a familiar figure for half a century.
Youngstown has shared the wildcatter's spirit, and has pioneered for nearly half a century in finding new and better ways to serve the oil industry. That's why you'll find Youngstown tubular goods wherever oil men go.
Youngstown believes that the company that leaves the beaten path and drills the discovery wells should profit thereby. That's the American system of free enterprise.
Now that the great wildcatting boom has started, you'll be buying Youngstown, the pipe with the orange band.
YOUNGSTOWN
THE YOUNGSTOWN SHEET AND TUBE COMPANY
YOUNGSTOWN, OHIO
Manufacturers of
CARBON - ALLOY AND YOLOY STEELS
Pipe and Tubular Products - Sheets - Plates - Conduit - Bars - Tin Plate
Rods - Wire - Nails - Tie Plates and Spikes - Alloy and Yoloy Steels

Treating Gas Sands to Prevent or Overcome Bad Effects of Water

By K. J. SONNEY and CHARLES E. WILLIAMS
of the United Natural Gas Company, Oil City, Pennsylvania

Field tests substantiate laboratory findings when company treats several wells by "killing" and reviving them by several methods. Conclusion: further investigation should yield even further suitable materials and also methods of application.

AS POINTED out in a previous article*, laboratory experiments indicate that the harmful effects of water on gas sands may be alleviated or avoided by the injection of certain fluids into the sand. Sands previously flooded with water were treated with alcohol, acetone, and acetone plus 10 percent ether, separately and it was found that each hastened the removal of water from the sand pores. Further, when it was desired to "kill" a well entirely, other substances than water were used, thus preventing the harmful effects associated with water on the sand.

Some past experiences showing that the existence of this problem has long been recognized by natural gas well operators are indicated by the following tabulation:

Well	Date Flooded	Volume in C.F. per Day		Remarks
		Before Flooded	After Flooded	
A	June, 1933	5,000	1,100	Vol. 1,697 after shooting.
B	Jan., 1928	6,000	3,500	Drilled deeper.
C	Jan., 1937	1,600	.....	Abandoned.
D	July, 1929	16,000	387	Abandoned.
E	Apr., 1935	26,000	245	
F	Pct., 1934	50,000	2,700	Shot.
G	1924	24,789	2,400	
H	Apr., 1939	26,938,000	15,475,000	

Geologists and engineers of United Natural Gas Company were aware of the fundamental action responsible for this decrease in productive capacity, but no definite course of action was taken to find a practical solution to the problem until well "H" above, whose initial open flow was gauged at 26,938,000 cubic feet per day was reduced to 15,475,000 cubic feet per day after flooding with water.

Following this experience, laboratory experiments by a United Natural Gas Company research employe in conjunction with research workers at the Petroleum Production Research Laboratories of The Pennsylvania State College were conducted.

In order to test the laboratory findings in the field, several tests were undertaken and it is the purpose of this paper to describe these tests and show some of the results obtained.

This well was drilled into a permeable sand in a storage area to permit greater output of stored gas during time of need. An 8¼-inch hole was drilled into the storage sand and a 4-inch flow string installed on packer a short distance above the sand. The well was selected for killing and reviving tests primarily because it was a shallow well entailing less experimental expense in treating materials and equipment and also because any detrimental effects, which might result from the experimental work, would not be serious. Two-inch tubing was installed in the well in order to reduce the quantity needed to kill the well with a head of liquid.

A diagram of the well connections and the lubricator is shown as Figure 1. A lubricator was necessary since the well had a flow of approximately 1,060,000 feet per day through 2-inch tubing with a closed-in pressure of 223 pounds gauge, making it impossible to inject liquid into the well without the aid of equipment such as a pump or lubricator. The lubricator was arranged with "swings" at the well head which permitted the free end to be raised or lowered for filling and emptying, and permitted the liquids to be collected and saved for future use.

The general procedure was to fill the lubricator with the liquid to be injected while the lubricator sloped downward toward the well. With the well closed in, the valve from the lubricator was opened and the liquid permitted to flow by gravity into the tubing. When sufficient liquid had been injected into the well to "kill" it, the pressure gauge on the well head read zero. The liquid level in the well was determined by means of a wooden float attached to a measuring line lowered into the well through a stuffing box.

In removing the liquid, the well was bailed or swabbed until flowing started. The flow stream was then turned into the lubricator, free end lowered, and the liquid trapped off, using the lubricator as a trap. Gas flow was permitted to escape from the 2-inch blow-off at the well end of the lubricator (see Figure 1). After each treatment, the well produced into the lime until the rate of gas flow, as determined from daily open flow and delivery tests, indicated that a settled condition existed.

First Killing Test

Table 1 gives a summary of the tests made and the results obtained. Figure 2 is a chronological graph showing all treatments of this well and the changes due to each treatment. The well was first "killed" with drip gasoline and remained completely dead for six hours, after which the flow came back to 1,000,000 cubic feet, or to 94.3 percent of the open flow before killing. Inasmuch as old tubing was used in this well, it is possible that some of the decrease in flow may have been due to dirt and rust obstructing the pores of the sand. An approximate chemical analysis of the drip gaso-

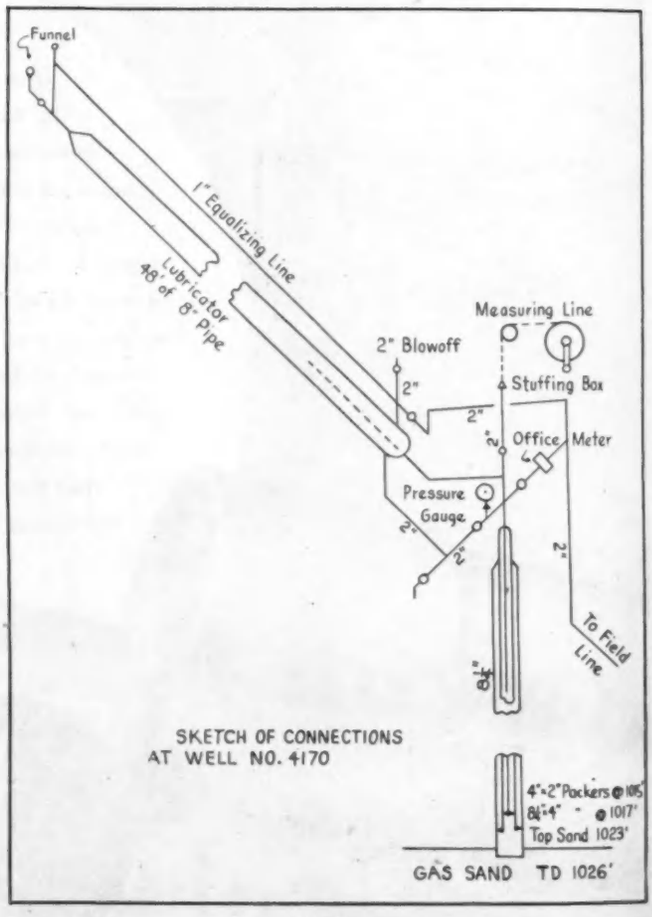


FIGURE 1

* "The Drowning and Revival of Gas Wells," by S. T. Yuster and K. J. Sonney (The Oil Weekly—May 15, 1944).

Oil field equipment that DEFIES WEAR and CORROSION

Two tough alloys offer protection against severe oil field conditions.

Like all INCO Nickel Alloys they are immune to rust...highly resistant to corrosion, erosion and abrasion.

But even more important are the *extra* properties of "K" Monel and its more machinable "brother," "KR" Monel.

Both display strength and hardness comparable to that of heat treated alloy steels. Both are non-magnetic.

In the as-rolled or as-drawn state, "K" Monel is stronger and harder than regular Monel. Prior to the heat treatment which develops its unusual strength and hardness, it may be readily formed and welded.

"KR" Monel as you will note from the table below, has many of the advantages of "K" Monel, *plus* superior machining qualities. It is ideal for parts which are to be heat treated after machining.

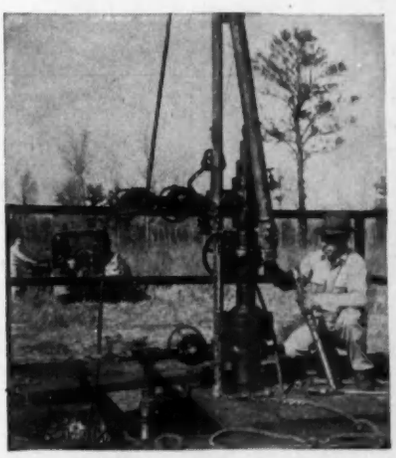
Because these alloys withstand corrosion . . . erosion and abrasion by sand and other solids . . . they are widely used to increase the life and serviceability of:

Gas Lift Valve Parts
Bottom Hole Regulators
Non-Magnetic Subs
Ball and Seat Valves
Drop and Seat Valves
Instrument Parts
Bottom Hole Chokes
Springs
Pump Shafts
Pressure Gauges
Working Barrels
Sucker Rods
Electrical Logging
Winch Drums

We shall be glad to send you detailed information about "K" and "KR" Monel in any contemplated use. Bulletin T-9, "Engineering Properties of "K" Monel," may also prove helpful. Write us for your free copy.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 WALL STREET NEW YORK 5, N. Y.

Heat treated "K" Monel has proved most resistant to the abrasive and corrosive action of impurities in crude oil and gas. It is therefore used by Otis Pressure Control, Inc., of Dallas in choke orifice, valve and valve seat for Type B Otis Removable Bottom Hole Choke. In this assembly, mandrel, clip carrier and band are regular Monel.



First step in lowering Otis bottom hole choke into a well.

"K" Monel is a registered trade-mark of The International Nickel Company, Inc., which is applied to a nickel alloy containing approximately two-thirds nickel and one-third copper, with a small aluminum content that permits hardening by heat treatment.

INCO MONEL K

INCO NICKEL ALLOYS	Condition	Tensile Strength 1000 psi.	Yield Strength 0.2% offset 1000 psi.	Elongation in 2 in. per cent.	Hardness Brinell 3000 kg.	Izod Impact Strength ft.–lb.	Mill Forms Available
"K" MONEL EXTRA STRENGTH AND HARDNESS, comparable to heat-treated alloy steel. Non-magnetic down to –150° F. Heat treatable	**Rod and Bar**						Rounds, H.R. Hexagons, H.R. Squares, H.R. Flats, Seamless Tube and Pipe, C.R. Strip, Welding Wire
	As Hot-rolled	90–120	40– 90	45– 25	140–240	120	
	Heat treated	140–160	100–120	30– 20	265–300	40	
	As Cold-drawn	100–135	70–100	35– 13	175–260	56	
	Heat treated	140–170	100–130	30– 15	265–320	26	
"KR" MONEL INCREASED MACHINABILITY. Extra Strength and Hardness. Non-magnetic • Heat treatable	**Rod and Bar**						Rounds, Hexagons, Squares
	As Hot-rolled	90–120	30– 60	45– 35	140–190	.....	
	Heat treated	130–150	90–110	30– 20	230–260	.....	
	As Cold-drawn	100–135	70–100	35– 13	175–260	.....	
	Heat treated	140–170	100–130	30– 15	265–320	.....	

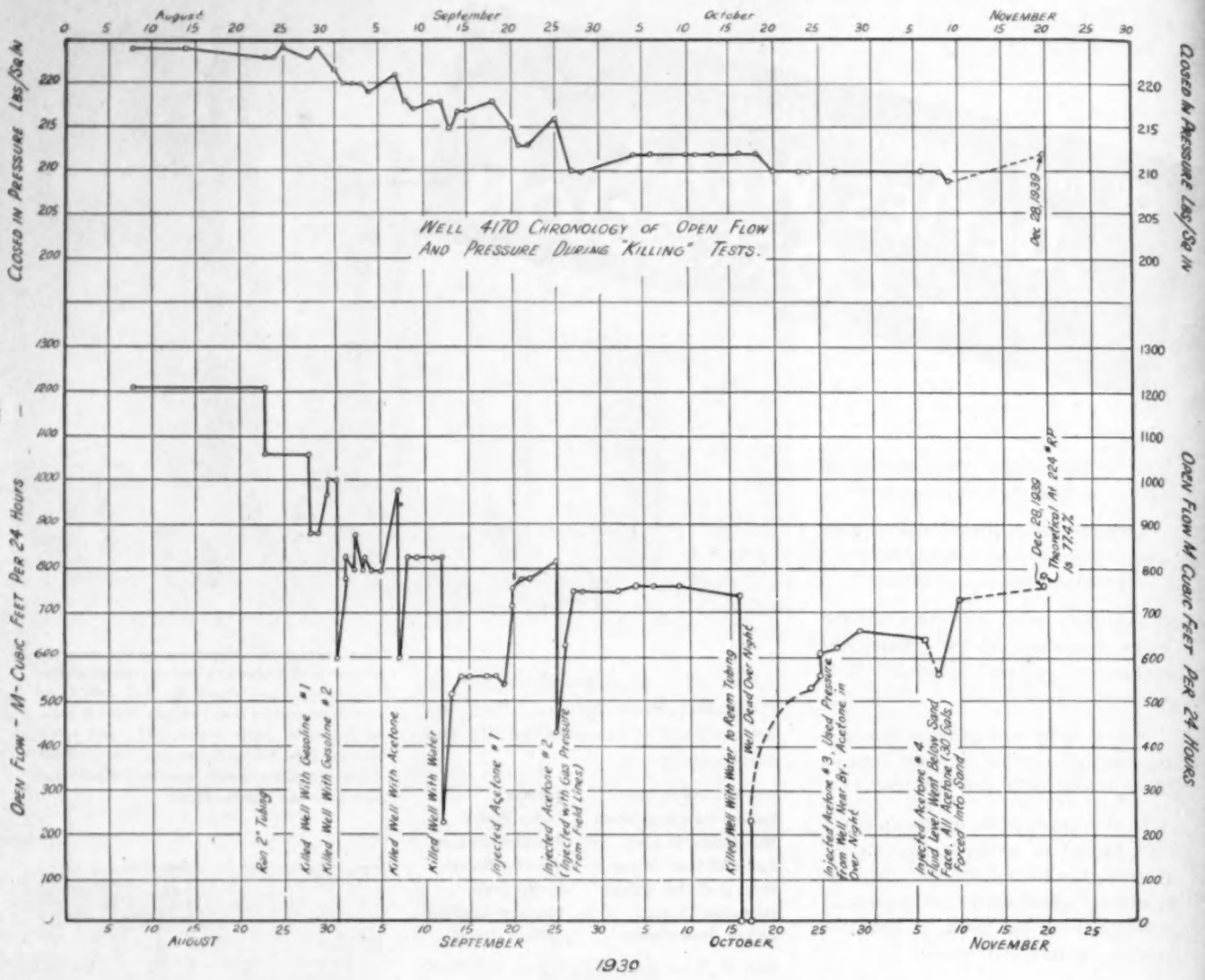

August
September
October
November
Closed in Pressure Lbs/Sq In
Open Flow - M Cubic Feet Per 24 Hours
Well 4170 Chronology of Open Flow And Pressure During "Killing" Tests.
Run 2" Tubing
Killed Well With Gasoline #1
Killed Well With Gasoline #2
Killed Well With Acetone
Killed Well With Water
Injected Acetone #1
Injected Acetone #2
Injected with Gas Pressure (Injected with Gas Pressure From Field Lines)
Killed Well With Water to Ream Tubing
Well Dead Over Night
Injected Acetone #3, Used Pressure From Well Near By. Acetone in Over Night
Injected Acetone #4 Fluid Level Went Below Sand Face. All Acetone (30 Gals) Forced into Sand
Dec 28, 1938
Theoretical At 224 #/P is 774 M
August
September
October
November
1930

FIGURE 2

Well 4170 Chronology of Open Flow and Perssure During "Killing" Tests

line used in killing this well is as follows:

Propane	1 to 2 %
Butane	20 to 25%
Pentane	50%
Hexane plus	23 to 29%
Initial Boiling Point	55°
End Point	350°

Second Killing Test

It was found necessary to ream the tubing in order to permit a swab to be used and the well was again "killed" with gasoline while reaming. It was dead and open to atmosphere for 55 minutes during which reaming was done. After this second "killing" the well came back to 988,000 cubic feet, or to 98.8 percent of the open flow before the second "killing." These two tests seem to indicate that there was no appreciable harm resulting from the use of

TABLE 1

Killing and Reclamation Tests Well 4170

OPERATION	Date Start			Date Finish			Total Time Elapsed Days	Hrs.	Min.	Closed in Press	Open Flow M.C.F. per Day Start	Finish	Gals. Fluid into Sand	Percent Change in Open Flow From Previous	From Original
Well completed and tubed with 2" tubing	..	..	..	8	23	39	..	..	..	223	....	1060	....	.....	.....
Killed flow with gasoline well open to air	8	28	39	8	28	39	..	6	08	223	1060	....	22	+100	100
Well producing into line	8	29	39	8	30	39	..	21	24	225	880	1000	....	— 5.7	— 5.7
Killed flow with gasoline, well open to air	8	31	39	8	31	39	..	..	55	....	1000	596	?	— 40.4	— 43.8
Shut in during days—Flowing through nights	8	31	39	9	7	39	7	..	..	221	596	988	....	+ 65.7	— 6.8
Killed flow with Acetone and well open to air	9	7	39	9	7	39	..	3	07	221	988	599	15	— 39.4	— 43.5
Shut in during days—Flowing through nights	9	7	39	9	12	39	5	..	..	218	599	825	....	+ 37.9	— 22.2
Killed flow with water	9	12	39	9	12	39	..	5	48	....	825	....	16.6	.....	.....
Shut in during days—Flowing through nights	9	12	39	9	18	39	6	..	..	218	230	563	....	— 31.8	— 46.9
Injected Acetone to overcome effect of water	9	18	39	9	19	39	..	20	10	....	563	....	48.8	.....	.....
Shut in during days—Flowing through nights	9	19	39	9	25	39	6	..	..	216	540	815	....	+ 44.8	— 23.1
Injected Acetone into sand	9	25	39	9	25	39	..	3	..	....	815	430	36.1	— 52.7	— 59.4
Shut in during days—Flowing through nights	9	25	39	10	16	39	21	..	..	....	430	738	....	+ 71.6	— 30.4
Killed flow with water	10	16	39	10	17	39	..	22	37	....	738	....	?	.....	.....
Shut in during days—Flowing through nights	10	17	39	10	24	39	7	..	..	....	232	529	....	— 28.4	— 50.2
Injected Acetone and left in sand over night	10	24	39	10	25	39	..	21	17	....	529	605	33.4	+ 14.4	— 42.9
Shut in during days—Flowing through nights	10	25	39	11	6	39	12	..	..	....	605	658	....	+ 8.8	— 38.0
Injected Acetone and followed up with gas into sand	11	6	39	11	6	39	..	6	12	....	658	....	30	.....	.....
Shut in—no flow either into or out of sand	11	6	39	11	8	39	1	17	..	210	....	555	....	— 15.6	— 47.7
Shut in during days—Flowing through nights	11	8	39	11	10	39	2	..	..	....	555	725	....	+ 13.1	— 31.6
Well shut in	11	10	39	12	28	39	48	..	..	212	725	745	....	+ 2.8	— 29.7

AJAX ENGINES

Ajax DRILLING ENGINES

Dependable POWER

SERVING THE NATION

IN FINDING NEW CRUDE PRODUCTION...

Horizontal and Vertical Twin Cylinder Steam
Drilling Engines . . . Steam Separators . . .
Throttle Valves . . . Hydrostatic Lubricators
. . . Marine Steam Engines

Manufactured Exclusively by

AJAX IRON WORKS
CORRY, PENNSYLVANIA

Distributed by
THE NATIONAL SUPPLY COMPANIES IN EVERY FIELD

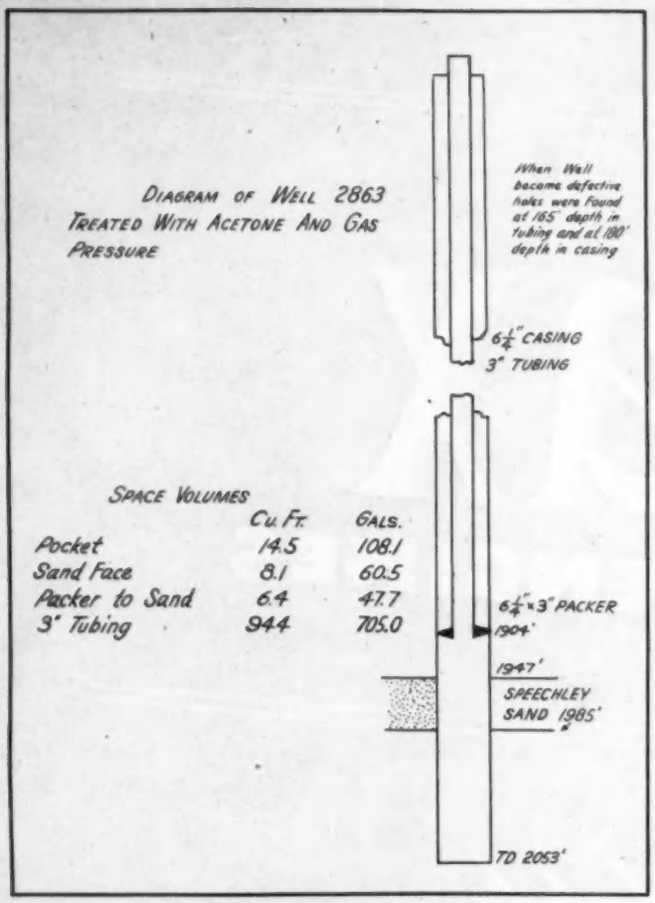


Diagram of Well 2863
Treated With Acetone And Gas
Pressure
When Well became defective holes were found at 165' depth in tubing and at 180' depth in casing
6¼" CASING
3" TUBING
Space Volumes
Cu Ft. Gals.
Pocket 14.5 108.1
Sand Face 8.1 60.5
Packer to Sand 6.4 47.7
3" Tubing 944 705.0
6¼" x 3" PACKER 1904'
1947'
SPEECHLEY SAND 1985'
TD 2053'

FIGURE 3

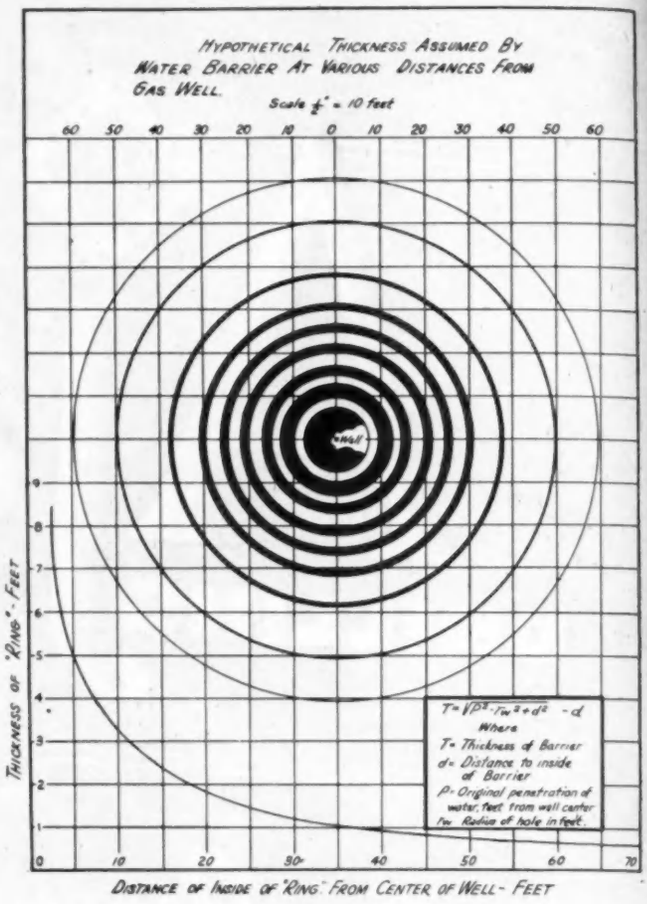

Hypothetical Thickness Assumed By Water Barrier At Various Distances From Gas Well.
Scale ¼" = 10 feet
60 50 40 30 20 10 0 10 20 30 40 50 60
Well
Thickness of "Ring" - Feet
0 10 20 30 40 50 60 70
Distance of Inside of "Ring" From Center of Well - Feet
T = √P² - rw² + d² - d
Where
T = Thickness of Barrier
d = Distance to inside of Barrier
P = Original penetration of water, feet from well center
rw = Radius of hole in feet.

FIGURE 4

gasoline in "killing" this well. These results bear out laboratory tests.

Third Killing Test

After "killing" the well twice with gasoline, it was then "killed" with a commercial grade of acetone. The analysis of this acetone is given as 65 percent or more by weight of Ketones and Esters and 35 percent or less by weight of methyl alcohol. The Ketone content ranges from 25 percent to 45 percent as acetone and the Ester content ranges from 25 percent to 45 percent as methyl acetate. The purpose of this test was to determine the effect of the acetone alone, and it will be noted that the well came back to an open flow of 825,000 cubic feet per day, or to 83.5 percent of the open flow before the third "killing." This would seem to indicate that there was some slight plugging effect produced by the acetone.

First Unplugging Test

After testing for the effect of acetone, the well was "killed" with fresh water from a spring and came back upon revival with an open flow of 563,000 cubic feet per day which was only 68.3 percent of the open flow immediately before injecting water. A single injection of acetone brought the well back to an open flow of 815,000 cubic feet per day or 98.8 percent of the open flow before "killing" with water. A second injection of acetone did not improve the open flow of the well but gave a decrease in flow of 9.5 percent or to 738,000 cubic feet per day.

Fresh acetone was not used on each successive treatment of the well and, although some precautions were taken against injecting contaminated acetone, it was noticed that considerable dirt accompanied the acetone removed from the well. Perhaps the contaminated acetone may account for the apparent ineffectiveness or relative inefficiency of some of the treatments.

Second Unplugging Test

The well was again "killed" with water and upon revival came back with an open flow of 529,000 cubic feet per day. A single injection of acetone, which remained on the sand over night, brought the flow up to 658,000 cubic feet per day. A second injection of acetone, which was loaded and followed into the sand with gas from a higher pressure well, increased the open flow to 725,000 cubic feet per day. This was within 2 percent of the open flow of the well immediately before "killing" with water the second time. The treatments with acetone indicate that results in the field are in accord with those obtained in the laboratory; further, added benefit may be obtained by following the acetone into the sand with gas.

It will be observed that the open flow at the end of the tests was 745,000 cubic feet per day, which is a net decrease of 29.7 percent from the open flow before the tests were started. Some of this decrease in flow is due to the decline in shut-in pressure of the well. After correcting for decline in shut-in pressure, the open flow at the end of the tests would be approximately 972,000 cubic feet per day, which is a net decrease of 22.7 percent from the theoretical open flow.

This well (Figure 3) had been flooded by a great head of fresh water and was completely drowned out. The water had been in contact with the producing sand for about one month. Under normal operations the well produced an extremely small volume of gas, from a tight sand, and in an area where the formation pressure was only about 80 pounds gauge.

Treatment of Well 2863

After repairs had been made to the tubing, the open gas flow was only 500 feet per day. It was selected for treatment because of the experimental results to be expected rather than the economical benefits to the low volume well. Due to the pressure and permeability of the producing sand, a different procedure was required at this well although the principle of following the acetone into the sand with gas, which was beneficial at well 4170, was considered advisable to follow.

A simple calculation can be made to show the action which should take place in such a process. If it be assumed that the water which damaged the well penetrates the sand evenly in all directions, it will spread in a ring whose center is the well. When gas is injected, it will push the water back into the sand and the ring will diminish in thickness according to the equation $T = \sqrt{P^2 - r_w^2 + d^2} - d$ as shown by the diagram Figure 4.

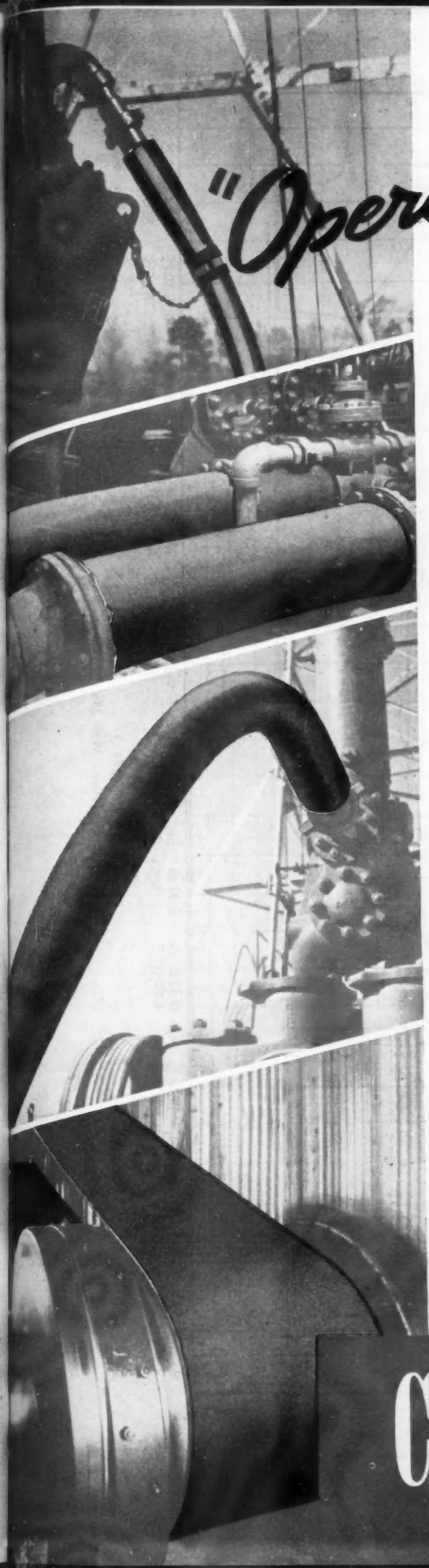
In the above equation:

T = Thickness in feet of the water barrier at any point.

P = The distance into the sand the water had originally penetrated, measured in feet from the well center.

r_w = The radius of the well bore in feet.

d = Distance in feet from the center



"Operating as Usual"

with

SYNTHETIC RUBBER HOSE, BELTING AND PACKING

Each type of synthetic rubber has certain exceptional properties, no one will satisfy the demands of all applications. Some rubber must withstand heat, others resist oil, flexing, abrasion, etc.

New York Belting & Packing Co. has been working with synthetic rubber . . . compounding, studying, testing . . . for more than *twenty* years. They have used it commercially, for more than twelve years. All five types have been used, none exclusively.

Remember, it's experience and knowledge that produces quality synthetic rubber products. Rely on New York Belting & Packing Company. Their products are made with the available synthetic rubber best adapted to the application, and PROVED, by performance tests, to do the job, with complete satisfaction.

★

NEW YORK BELTING & PACKING CO.

RUBBER GOODS

Distributed by

THE CONTINENTAL SUPPLY COMPANY

General Offices: DALLAS, TEXAS

EXPORT DIVISION

30 Rockefeller Plaza New York City, N. Y.

Representatives

MEXICO ARGENTINA ENGLAND TRINIDAD BRAZIL

CONTINENTAL

SERVING THE OIL AND GAS INDUSTRIES

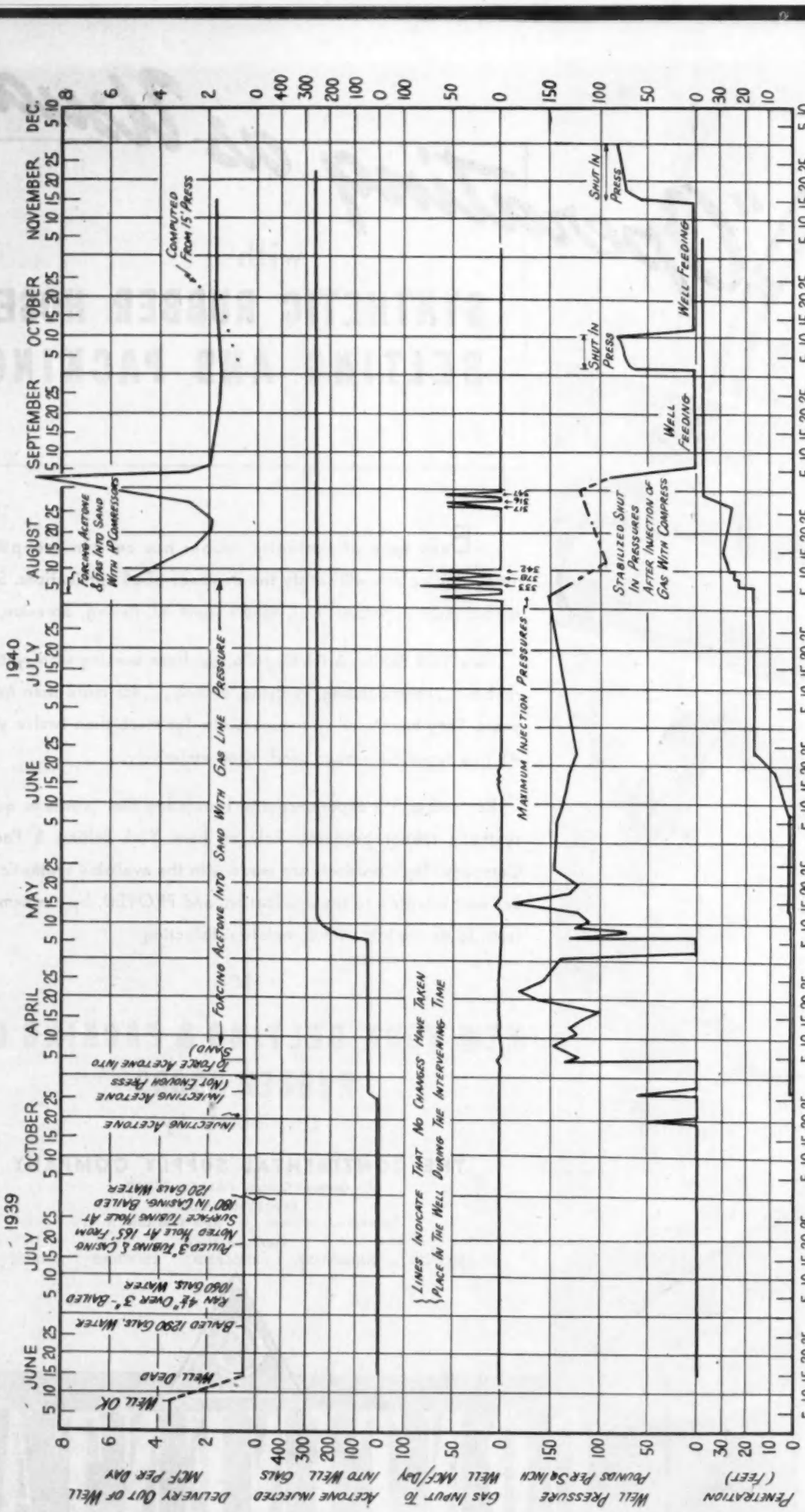

Delivery Out Of Well MCF Per Day
Acetone Injected Into Well Gas
Gas Input To Well MCF/Day
Well Pressure Pounds Per Sq Inch
Penetration (Feet)
Well OK
Well Dead
Ran 4½" Over 3"- Bailed 1080 Gals. Water
Pulled 3" Tubing & Casing Nitro Hole At 165' From Surface Tubing Hole At 180', In Casing. Bailed 120 Gals Water
Injecting Acetone
Injecting Acetone (Not Enough Press
To Force Acetone Into Sand)
Forcing Acetone Into Sand With Gas Line Pressure
Lines Indicate That No Changes Have Taken Place In The Well During The Intervening Time
Maximum Injection Pressures
Forcing Acetone & Gas Into Sand With HP Compressors
Computed From 15' Press
Stabilized Shut In Pressures After Injection Of Gas With Compress
Shut In Press
Well Feeding
Shut In Press
Well Feeding
1939
1940
JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DEC.

FIGURE 5
Chronology of Operations, Well 2863 Reclamation

Pipe-line Diesel Engine

type control for Great Lakes Pipe Line

of the well to the inside edge of the water barrier.

If the ring is pushed out far enough, it will eventually break, leaving channels cleared for gas passage. Further, it can be shown that if high pressure, relatively dry gas is forced into the well, it will pick up fluid vapors in expanding from the injection pressure to the formation pressure; and, also, in expanding from the formation pressure to the lower well pressure when the flow is reversed and the well is placed on production. If the water in the sand were previously diluted with acetone, it would seem that the maximum benefit could thus be obtained.

Connections were made to high pressure gas lines in the field and, after placing 244 gallons of acetone above the sand, an attempt was made to force the acetone into the sand and follow it with gas. Although the acetone was forced into the sand, it was not possible, with the pressure available, to obtain sufficient penetration to break down the water barrier. A portable gas compressor, capable of pumping against 500 pounds pressure, was then installed in the system and several injections of gas were made as shown on Table 2 and Figure 5.

Results from this test show that the barrier was finally broken and that the well is evidently in communication with the rest of the field. The flow has been increased from 500 to 2400 feet per day. The flow, previous to flooding when computed from the 15-minute rise above line pressure, was 3500 feet per day. Calculations of the distance the water ring moved indicates that the ring, if maintained in circular shape, broke through at a distance of 37.8 feet from the well.

These results are very encouraging when the circumstances under which treatment was made are considered. Tests made in June, 1941, and August, 1943, show the well to be about the same as it was previous to treatment, and it has been producing gas into the line continuously since it was treated except for short periods to permit taking pressures.

Killing Flow of Well 3507

In addition to tests on the two wells as explained above, it has been necessary, in order to repair, to "kill" a well having an open flow of 380,000 feet per day and a rock pressure of 655 pounds gauge. Enough acetone was lubricated into the well to cover the producing sands so that the uppermost sand was covered to a depth of 20 feet; the remainder of the hole was then filled with water to a point sufficient to balance the formation pressure. The well was then bridged below the pipe depth but above the producing sands, and was completely dead for a period of 7 days, during which time casing repairs were made. After the casing was repaired, the tubing was fished out and the bridge removed. Between the seventh and fourteenth days, the well started gassing slightly but no fluid was added to stop the gas flow. After the well was cleaned out, the fluid removed, and the well put back on production, the open flow was gauged at 346,000 cubic feet per day, a decrease of only 9 percent from the flow before killing. This compares with decreases in flow as great as 59 percent when other wells have been killed with water alone.

Conclusion

Results of these tests substantiate in a way the laboratory findings. It is believed that there is a wider field for application of this process, and further investigation should yield other suitable materials and methods of application.

TABLE 2

Reclamation Tests Well 2863

Date	OPERATION	Total Fluid Injected Gallons	Gas Injected Cubic Feet	Computed Penetration of Fluid Feet	Well Delivery Capacity Cu. Ft. per Day	Injection and Shut In Pressure per Sq. In.
6- 8-39	Well tender reports well O.K.	.....	.....	.....	3,500	.....
6-15-39	Well tender reports well drowned out	.....	.....	.....	0	.....
6-27-39	Bailed 1290 gallons water from well	.....	.....	.....	0	.....
7- 5-39	Ran 4½" tubing and packed over existing 3". Bailed 1060 gals. water from well	.....	.....	.....	0	.....
7-18-39	Pulled Tubing and Casing. Tubing failure at 165 ft. Casing at 180 bailed 120 gals.	.....	.....	.....	.....	.....
.....	Repaired tubing leak and tubed well with 3" tubing	.....	.....	.....	500	.....
10-20-39	Injected Acetone, loading fluid with field line pressure	.....	.....	.....	.....	59
10-27-39	Injected Acetone, loading fluid with field line pressure	35.7	.....	.85	.....	66
10-31-39	Bailed well dry and left it open to atmosphere	.....	.....	.....	.....	.....
11- 6-39	Bailed well dry and left it open to atmosphere. Removed 15 gals.	.....	.....	.....	.....	.....
11-13-39	Bailed well dry and left it open to atmosphere. Removed 7 gals.	.....	.....	.....	.....	.....
4- 3-40	Bailed well dry and left it open to atmosphere. Removed 68 gals.	.....	.....	.....	.....	.....
4- 4-40	Fed gas into well from high pressure main line	.....	.....	.....	.....	136
4- 5-40	Main line pressure on well	.....	0	.....	.....	118
4- 8-40 to 4-19-40	Main line pressure on well	.....	14,500	.....	.....	Avg. 116
4-19-40 to 5- 1-40	Main line pressure shut off and pressure obtained from high pressure well on system	.....	14,800	.....	.....	Avg. 157
5- 1-40	Turned off high pressure from well	.....	.....	.....	.....	.....
5- 2-40	Obtained open flow	.....	.....	.....	500	.....
5- 6-40	Injected Acetone loaded with gas pressure from high pressure well on system	102	.....	.....	.....	122
5- 7-40	Injected Acetone loaded with gas pressure from high pressure well on system	159	.....	.....	.....	125
5- 8-40	Injected Acetone loaded with gas pressure from high pressure well on system	193	.....	.....	.....	140
5- 9-40	Injected Acetone loaded with gas pressure from high pressure well on system	233	.....	.....	.....	100
5-10-40	Injected Acetone loaded with gas pressure from high pressure well on system	237	.....	.....	.....	121
5-11-40	Injected Acetone loaded with gas pressure from high pressure well on system	244	.....	1.5	.....	111
5-11-40 8- 3-40	Attempting to force fluid into sand with pressure from adjoining well	.....	51,770	16.4	.....	Avg. 143
8- 5-40	Forcing fluid back into sand with gas from compressor	.....	3,564	21.5	.....	.....
8- 6-40	Forcing fluid back into sand with gas from compressor	.....	11,705	23.0	.....	Max. 333
8- 7-40	Feeding gas from well into line. Removed 1578 fte	.....	.....	.....	.....	.....
8- 8-40	Forcing fluid back into sand with gas from compressor	.....	20,880	25.1	.....	Max. 378
8- 9-40	Well shut in to equalize pressure	.....	.....	26.7	.....	.....
8-10-40	Forcing fluid back into sand with gas from compressor	.....	8,960	27.3	.....	Max. 342
8-10-40 8-14-40	Well shut in to equalize pressure	.....	.....	29.3	.....	Min. 86
8-14-40 8-27-40	Feeding gas from well into line. Removed 27,300 fte	.....	.....	25.3	.....	2
8-27-40 8-30-40	Forcing fluid back into sand with gas from compressor	.....	35,309	37.8	.....	Max. 347
8-30-40 10-11-40	Feeding gas from well into line	.....	.....	.....	2,420	2
10-11-40 10-22-40	Well shut in for pressure test	.....	.....	.....	.....	Max. 80½
10-29-40	Open flow test	.....	.....	.....	2,400	.....
11-16-40 11-30-40	Well shut in for pressure test	.....	.....	.....	.....	Max. 79½

Pipe-line Diesel Engine

Speed Control by Hydraulic Device*

Appreciable reduction in evaporation losses and other advantages are affected through use of development

By J. RAY POLSTON, Engineer, Stanolind Pipe Line Company, Tulsa

HYDRAULIC speed-control devices that are attached to self-contained types of governors have been developed for use on engines that drive pumps handling fluids through long distance pipe lines. Their primary purpose is to eliminate evaporation losses of the oil handled at pumping stations. By synchronizing the pumping rate of two or more pump stations, it is possible to reduce movement of oil in and out of working tanks at the relay pump stations. Evaporation losses are reduced by maintaining a constant oil level in the tanks.

The hydraulic speed control regulates engine speed by positioning the governor speeder spring by means of hydraulic pressure from the pump suction line. An increase in pressure causes the engine to speed up with a corresponding increase in the pumping rate. When the suction pressure drops the pumping rate decreases. By operating all engines except one at nearly constant speed, and varying the speed of the one engine by pump suction pressure at a relay pump station, the pumping rate is controlled by, and is equal to, the pumping rate at the station from which it receives oil.

Back-Pressure Control Valve

Enormous evaporation losses result from the old practice of floating a large tank on the suction to the pumps at each station. Extensive tests at one station handling more than 100,000 barrels of crude oil daily showed an evaporation loss in excess of $40 per day. The need for a closed pumping system became apparent and a back-pressure control valve was designed. This consists of a diaphragm-operated, balanced-inner-valve, relief type, spring loaded regulator installed in the tank suction line between the tank and incoming receiving line connection. A swing check valve is installed on a by-pass connection around the regulator valve to permit pumps to take suction directly from the tank when pumping more oil than is received.

By carrying 10 to fifteen pounds pressure on the suction of the pumps, two purposes were accomplished. First the pumps which had been increased in speed and capacity were adequately filled, thus increasing their volumetric efficiency. Second, the oil for great distances could be kept moving through the pipe line without going in and out of tanks at each station; consequently, excessive evaporation losses are avoided.

The development of the back-pressure control valve and its use made possible a means of controlling the speed of pumping engines hydraulically for synchronizing the speed and pumping rate of one station with another. This was accomplished over a period of about one year during which several different types of devices were designed and tested.

The hydraulic speed control governs the speed of the engine by positioning the governor control spring by means of pressure from the suction of the pump. Its purpose is to automatically control the pumping rate of an entire pump station or group of stations from the pressure on the incoming lines so that a minimum of liquid will pass in and out of the working tanks to reduce evaporation losses. This control is so sensitive that the pumping rate of an entire six unit pump station may be controlled by varying the speed of only one of the larger pumping units. It is advisable, however, to install hydraulic control on two engines in order to provide flexibility of operation and for shutting down to make adjustment and repairs.

Manual Control Provision

Any acceptable design must permit the engine governor to operate against the speeder spring originally furnished by the manufacturer and include means for disengaging the hydraulic device for manual control. It must also provide limit stops for the traveling part of the hydraulic device to prevent the danger of excess engine speed. Excess pressures do not affect the operation. The stops are set for the minimum engine speed at zero pressure and for maximum speed at the pre-determined maximum pressure. Pressure in excess of the pre-determined maximum will not further increase the engine speed.

Several types of hydraulic speed control devices are in use. These include a direct piston-operated hydraulic control, a piston-operated speed screw control, a direct bellows-operated control, and a bellows-operated pilot control. Each of these devices is designed so it may be disengaged to permit manual operation of the engine governor. W. G. Heltzel and J. B. Harshman, of Stanolind Pipe Line Company, collaborated with the writer in development of this equipment. C. C. Keane and F. E. Richardson built the first direct bellows type control for Great Lakes Pipe Line Company.

Results and Conclusions

The following results have been obtained from combined use of hydraulic speed control and back pressure regulator valve:

(1) Reduced evaporation losses.

(2) Improved filling of pumps, thus permitting an increase of pump speed for providing additional capacity of present equipment.

(3) Permitted increase in velocity of oil in pump suction lines.

(4) Greater sensitivity of operation, i.e., leaks are more readily detected in lines with controlled suction pressure.

In some instances, at stations pumping to terminals, recording tachometers have been installed in conjunction with the hydraulic speed control that record engine speed variations. It also provides a record of engine operation and has proved valuable in determining the cause of pressure drop in discharge lines or any variation in deliveries at terminals.

Although no definite figures are available that show the savings resulting from the use of hydraulic speed control on pipe line pumping engines, it is believed, after six years of development and testing this principle at certain stations, that an appreciable reduction in evaporation losses has been effected. Our company has not made full use of the possibilities of hydraulic speed control; however, it is expected that the principle may eventually be used extensively, and it is our opinion that complete closed pumping systems for great distances are possible.

*Digest of a paper presented before the Oil and Gas Power Division of The American Society of Mechanical Engineers' national meeting, May 8-10, Tulsa, Okla.

Foreign Policy Book Considers Petroleum

"Petroleum and American Foreign Policy" is a new publication issued by the Food Research Institute, Stanford University, Stanford, California.

The booklet has been prepared by Herbert Feis, an economist, until recently adviser on International economic affairs in the Department of State. In his preface the author says:

"This study is an attempt to present the pertinent facts and judgments which American policy and action should take into account. I have assumed that American political and military aims are the safeguarding of the independence security, and welfare of the United States by lawful and orderly measures; and that our interest is in free and full development of, and access to, the oil and other resources of the Middle East, not in exclusive control of them. I have correspondingly assumed that we have no designs against the political position of any other country in the area, no wish to maintain permanent military establishments there (apart from any United Nations or other international military establishment in which we may play a part), and no territorial ambitions.

"It is essential, furthermore, that Middle Eastern oil problems be considered not in isolation, but in relation to the entire American oil position and as part of the world oil position. Without full perspective, it is easy to get lost in the far-away desert country and to stumble wearily into the salt Dead Sea. Thus I have undertaken, in summary fashion, to review the whole petroleum situation and to outline a general policy into which Middle East petroleum policy would fit."

Price of the publication is 50 cents.

Major Oil Province Promised In Southeastern States

Ten oil fields in Mississippi, Alabama, and Florida offer hope that many more will be found in eastern part of coastal belt; formations are same as west of Mississippi River, and numerous structures known

By L. J. LOGAN, Associate Editor

ENCOURAGED by the increasingly acute national need for new oil fields and given strong impetus by discovery of seven widely scattered oil fields in less than a year between the eastern Louisiana border and the southern tip of Florida, there is under way in Mississippi, Alabama, Georgia, and Florida an intensive exploration and drilling campaign of wide interest and great importance. Already featured by several first-class discoveries, this development ultimately may lead to the establishment of a new, major oil-producing province, representing an eastward continuation to the Atlantic of prolific fields of eastern Texas, Arkansas, and Louisiana.

With the region are formations which yield major production west of the Mississippi, and also present are numerous known structures which could furnish traps for oil, while it may be confidently expected that many more structures will be found. Belief in the importance of the region is manifested in leasing, geophysical work, drilling, and royalty trading.

So far, the region has been prospected only superficially, because until recently the need for new fields there was not urgent. Consequently a great deal remains to be learned.

Impetus for present development and for indicated accelerated activity in the future has been supplied by the four oil field discoveries in Mississippi in the latter half of last year, the late 1943 strike in southern Florida, and finally and particularly by two more discoveries, almost simultaneously, in February of this year; the highly promising Heidelberg field, Jasper County, southeastern Mississippi, and 40 miles eastward, the Gilbertown field, Choctaw County, Alabama, located 9 miles from the Mississippi border and representing Alabama's first commercial oil discovery.

Three Fields Highly Promising

Described by some as one of the most important discoveries in the United States in recent years, the Heidelberg strike, coupled with the earlier important discovery at Eucutta, 12 miles to the southeast, is generating a modern oil field boom at Laurel, about 16 miles to the south and west of the two fields. A major supply company several weeks ago opened a warehouse at Laurel, and others were arranging for locations. Gulf Refining Company, discoverer of both those fields, has revealed appropriation of $4,500,000 for drilling in the Laurel area, with immediate plans calling for at least 50 wells at Heidelberg and about 25 at Eucutta.

Heidelberg still is conceded to have possibilities of producing from 50,000,000 to 100,000,000 barrels, or more, in spite of several recent tests that have somewhat narrowed the expected productive area and thus tempered earlier forecasts of even greater reserves. Although the pay will narrow as wells are drilled down structure toward water, the field's second well had 200 feet net oil pay in 12 sands of the Eutaw formation and 3 in Upper Tuscaloosa within a 500-foot section bottomed at 4950 feet. (For late developments at Heidelberg see Field Operations section.)

The Eucutta field is considered good for 50,000,000 barrels ultimate production, being productive in the Eutaw around 5100 feet and in the lower Tuscaloosa around 6700 feet. The Cranfield field, westward across the state, near Natchez, southwestern Mississippi, is being discussed as at least a 100,000,000-barrel field. The Cranfield discovery well was completed as a producer of 44 gravity oil in Wilcox sand at 5900 feet after having also yielded some 56 gravity, straw-colored oil along with gas (gas-oil ratio 12,000 to 1) from Massive Sand of the Lower Tuscaloosa formation, which was topped at 10,226 feet and penetrated to total depth of 10,383 feet.

These figures are significant, considering that only about 50 oil fields of the United States so far have produced 100,000,000 barrels or more, each, while ultimate production of 20,000,000 barrels qualifies a field, in the industry, as a "major field." The Tinsley field, central Mississippi, now a little over 4½ years old, already has produced nearly 70,000,000 barrels; and still producing approximately 1,000,000 barrels per month, in spite of heavy water encroachment, the penalty of failure to follow modern conservation practices, it may emerge ultimately into the select group of 100,000,000-barrel fields. Tinsley has a productive area of about 10,500 acres and several pay zones in three formations, the Selma, Eutaw, and Upper Tuscaloosa.

Even on the strength of 1943 discoveries, Mississippi and Alabama had attracted sufficiently important activity to impel numerous companies, including major concerns, to establish district offices for land men and geologists at Jackson, Mississippi, late last year and early this year.

Currently, both geophysical work and drilling are proceeding upon an impressive scale. The geophysical work is about equally divided between reconnaissance and detailed mapping, with gravimeters outlining areas of interest and reflection seismograph work obtaining structural details. In the Southeastern States currently are employed 44 percent of the total gravity instrument parties in operation in the United States, 38 being active there, including 16 in Mississippi, 8 in Alabama, and 14 in Florida. Mississippi and Georgia each has one magnetometer survey in progress. The Southeastern States meanwhile account for 15 percent of the total reflection seismograph parties at work in the United States, having 41 busy, including 33 in Mississippi, 4 in Alabama, and 2 each in Georgia and Florida.

Even prior to 1943 numerous salt domes and structures had been definitely indicated by geophysics, and others subsequently have been found, although detailed information has not been generally divulged. In Mississippi last year 9 shallow domes were proved by drilling.

Wildcatting Brisk

Currently, wildcatting is scattered over 17 counties of the Southeastern States, including 14 counties in Mississippi, 2 in Alabama, and 1 in Florida. Nineteen wildcats are being drilled in those 17 counties.

In the first three months of this year, 18 wildcats were completed as dry holes, in addition to 2 that opened new fields, and much valuable geological information was afforded by the dry tests. The 18 dry wildcats of January-March, 1944, included 14 in Mississippi, 3 in Alabama, and 1 in Georgia. In 1943 there were 78 dry wildcat completions in addition to the 5 discovery wells of the region, including 58 in Mississippi, 12 in Alabama, 4 in Georgia, and 4 in Florida. In 1942 there had been 64 unproductive wildcats, including 51 in Mississippi, 8 in Alabama, 2 in Georgia, and 3 in Florida.

The development so far has been only a preliminary scratching of the surface of so vast a region. The total area of the four southeastern coastal states of Mississippi, Alabama, Georgia, and Florida, is two-thirds as great as that of the coastal states of Louisiana and Texas. From Natchez, Mississippi, on the Mississippi River, to the southeast tip of Florida, is a land distance of 800 miles, whereas it is only 600 miles by

land from Natchez southwesterly to the Rio Grande.

Within the four Southeastern States, the region of particular interest to oil prospectors, because of having large thicknesses of sedimentary formations and desirable structural conditions for yielding oil fields, is the coastal province, roughly a belt 125 miles wide, paralelling the coast, from the Mississippi River to the southern tip of Florida, thus embracing the southern halves of Mississippi, Alabama, and Georgia, and all of Florida, with southern or coastal portions of South Carolina and North Carolina also having possibilities, although so far practically unexplored. North of that coastal province, toward the mountains, is the province of the older, Paleozoic-age rocks, which does not have at present the interest which is attached by oil prospectors to the region of younger sediments to the south. However, the Paleozoic formations are producing gas from shallow depths in the Amory field, northeastern Mississippi, and in three fields of northwestern Alabama, the Amory field having been discovered in 1926, with the pay in sandstone of Mississippian age, to give Mississippi its first gas production.

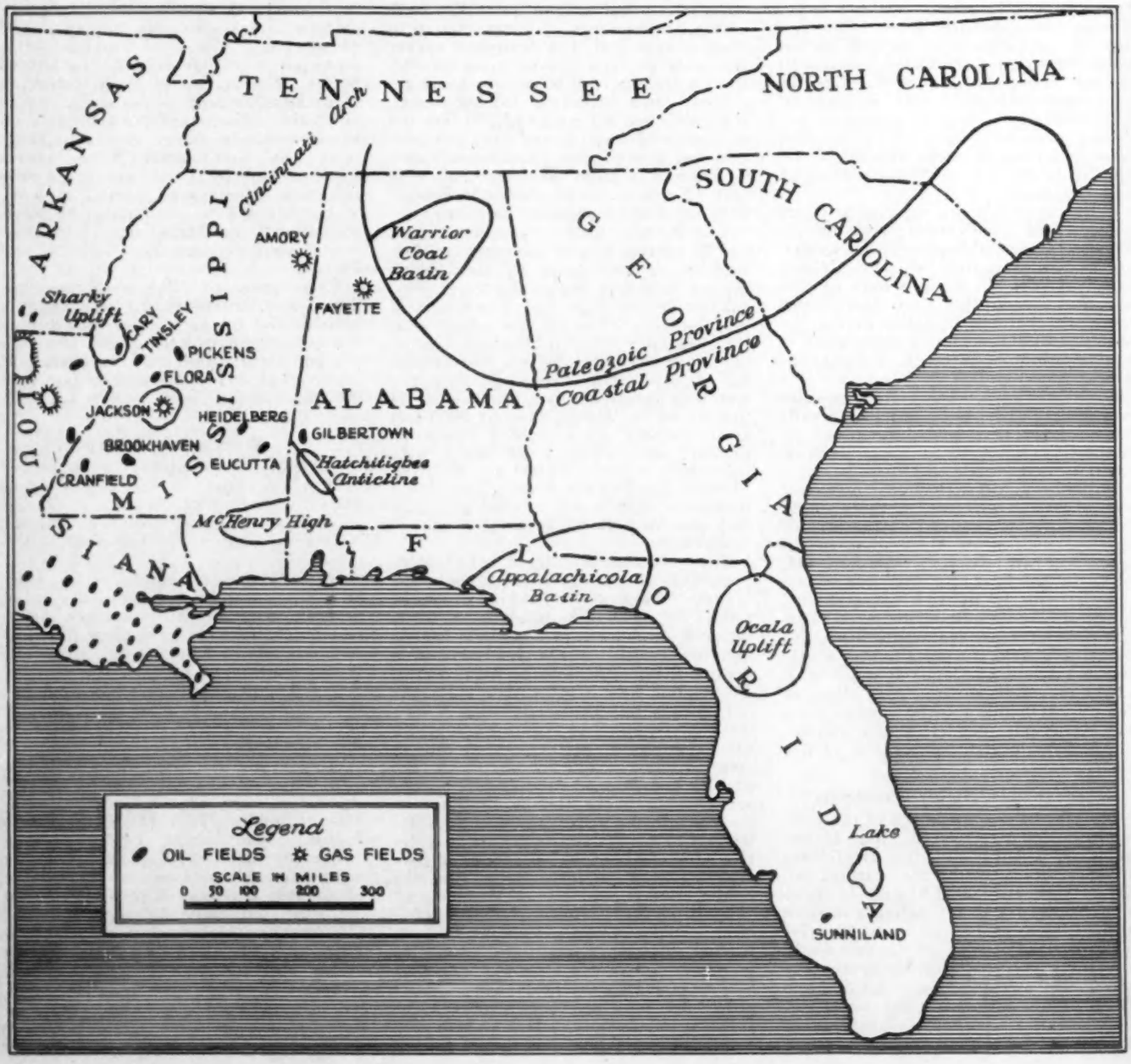
Those older, Paleozoic formations dip southward toward and under the Gulf of Mexico, but within the coastal province are overlaid by a series of younger sediments, laid down successively. Thus in going southward from the mountains toward the Gulf of Mexico, geologists find the surface outcrops of progressively younger formations, laid down first upon the southward and downward sloping Paleozoic rocks and then one upon the other, as ancient seas receded toward the south.

In the northern portion of the coastal province, wells go through the younger formations and into the Paleozoic formations, but toward the south, larger and larger thicknesses of the younger formations have been laid down, and with most of them being potentially productive of oil, the possibilities for the oil operator are increased. Along the coast, practically the whole gamut of geological formations lies below the spudding well, and as the bit goes down there are possibilities for production from formations of Eocene, Upper Cretaceous, Lower Cretaceous, and Jurassic age; although formations of the latter two groups are missing in the northern portion of the coastal belt, the Upper Cretaceous having been laid down directly upon the Paleozoic rocks. Already, Mississippi has production from the Eocene-age Wilcox formation and Selma, Eutaw, and Tuscaloosa formations of the Upper Cretaceous, and Alabama has a Selma sand field, while southern Florida now is productive from the Glen Rose formation of Lower Cretaceous age.

All these formations throughout the coastal region represent a continuation of those of Texas, Arkansas, and Louisiana, which have noteworthy records of oil production.

To produce in major quantities also in the Southeastern States, these formations must be disturbed regionally and locally, by the existence of anticlines,

Regional Structures and Oil and Gas Fields of Southeastern States



The TESCO Hallmark is the symbol of quality in industry today.

TEXAS ELECTRIC STEEL CASTING CO.

GOOD CASTINGS — CARBON AND TESCO ALLOY STEEL — HOUSTON, TEXAS

T E S C O

BETTER STEEL FOR MODERN INDUSTRY

salt domes, faults, and other structural conditions; and such structures do exist in large number and will be discovered in further large numbers, just as they have been found to the west of the Mississippi, although they are mainly masked at the surface by evenly-laid-down younger formations, thus requiring geophysics and subsurface geology for detection.

While information has not been made known generally on the numerous local structures and domes, several regional structural features are well known to geologists. In West Central Mississippi is the Sharkey County Uplift, on which has been developed the Cary oil field, and which is associated with an area of igneous activity also involving the Monroe and Richland gas fields of North Louisiana. Not far to the east is the Jackson Uplift, also associated with an area of igneous activity, the 7500-acre Jackson gas field being on the crest of this uplift and having possibilities for oil production on its flanks. Between these two major uplifts are the Tinsley and Flora oil fields, and to the northeast of them is the Pickens oil field.

Across Mississippi to the southeast, centering around the south end of Choctaw County, Alabama, is the large, northwest-southeast trending Hatchitigbee anticline, on which is located the new Gilbertown oil field of Alabama. To the southwest, in the southwest corner of Alabama and the southeast corner of Mississippi is the McHenry High, on which wildcats have obtained showings of oil and found promising sands in Eutaw and Tuscaloosa formations, one deep test in Jackson County, Mississippi, having gone out of Upper Cretaceous and into Lower Cretaceous at 8905 feet

Summary of Wildcatting in Southeastern States Currently and in Recent Years

COUNTY	Number of Dry Wildcats Abandoned 1942	1943	First 3 Months, 1944	Wildcats Drilling April 1, 1944
ALABAMA—				
Choctaw	..	1	..	..
Clarke	1	..	..	..
Covington	1	..	..	..
Escambia	..	1	1	..
Fayette	1	..	..	..
Franklin	1	..	..	..
Lamar	..	1	..	..
Lauderdale	1	1	..	..
Marengo	..	1	..	..
Marshall	..	1	..	..
Monroe	..	1	..	..
Tuscaloosa	1	1	..	..
Walker	..	2	..	1
Washington	..	1	2	1
Wilcox	1	1	..	..
Winston	1	..	..	..
Total Alabama	8	12	3	2
FLORIDA—				
Dade	1	..	..	1
Dixie	1	..	..	..
Levy	1	..	..	..
Osceola	..	2	..	..
Wakulla	..	1	..	..
Walton	..	1	..	..
Total Florida	3	4	..	1
GEORGIA—				
Coffee	..	1	..	..
Clinch	..	..	1	..
Daughtery	2	1	..	..
Early	..	1	..	..
Wayne	..	1	..	..
Total Georgia	2	4	1	..
MISSISSIPPI—				
Adams	3	..	2	3
Attala	..	1	..	1
Bolivar	..	1	..	..
Carrol	..	1	..	..
Chickasaw	1	..	..	..
Claiborne	1	1	..	..
Clarke	3	2	1	..
Copiah	..	7	..	1
Forest	1	..	..	1
Franklin	1	..	..	1
Greene	..	2	1	..
Grenada	1	..	..	..
Harrison	1	..	..	..
Hinds	4	3	..	..
Humphreys	..	1	..	..
Issa Quena	1	5	2	..
Itawamba	1	..	..	..
Jackson	..	1	..	..
Jefferson	..	3	..	1
Jeff Davis	..	2	2	..
Jones	2	..	..	1
Kemper	1	1	..	1
Lamar	5	..	..	..
Lauderdale	..	..	..	1
Lawrence	..	2	..	1
Leake	..	1	..	..
Lincoln	..	..	1	..
Madison	3	7	..	..
Marion	..	..	..	1
Montgomery	1	..	..	..
Neshoba	..	1	..	..
Newton	..	1	..	..
Oktibbeha	1	..	..	..
Pearl River	4	..	..	..
Pontotoc	..	1	..	..
Rankin	..	1	1	1
Scott	3	..	..	..
Sharkey	2	2	..	..
Simpson	2	2	..	..
Stone	1	3	..	..
Sunflower	1	..	..	..
Tippah	1	..	..	..
Union	..	..	..	1
Warren	2	..	..	..
Washington	..	1	..	1
Wayne	..	1	..	..
Wilkinson	1	..	1	..
Winston	1	..	..	..
Yazoo	2	4	3	..
Total Miss.	51	58	14	*16
Total Southeastern States	64	78	18	*19

This boy — a typical American — when he grows up, may want to be a farmer . . . an engineer . . . a mechanic . . . a doctor . . . a grocer . . . a banker . . . a manufacturer — yes, he may want to be president of Southwestern Gas and Electric Company.

What he will want to be is not so important. That he have an **opportunity** to be what he wants is all important—**it is America.** We have a duty to preserve for the American boy our way of life which assures him an opportunity to obtain reward in proportion to his ability and energy in his chosen work.

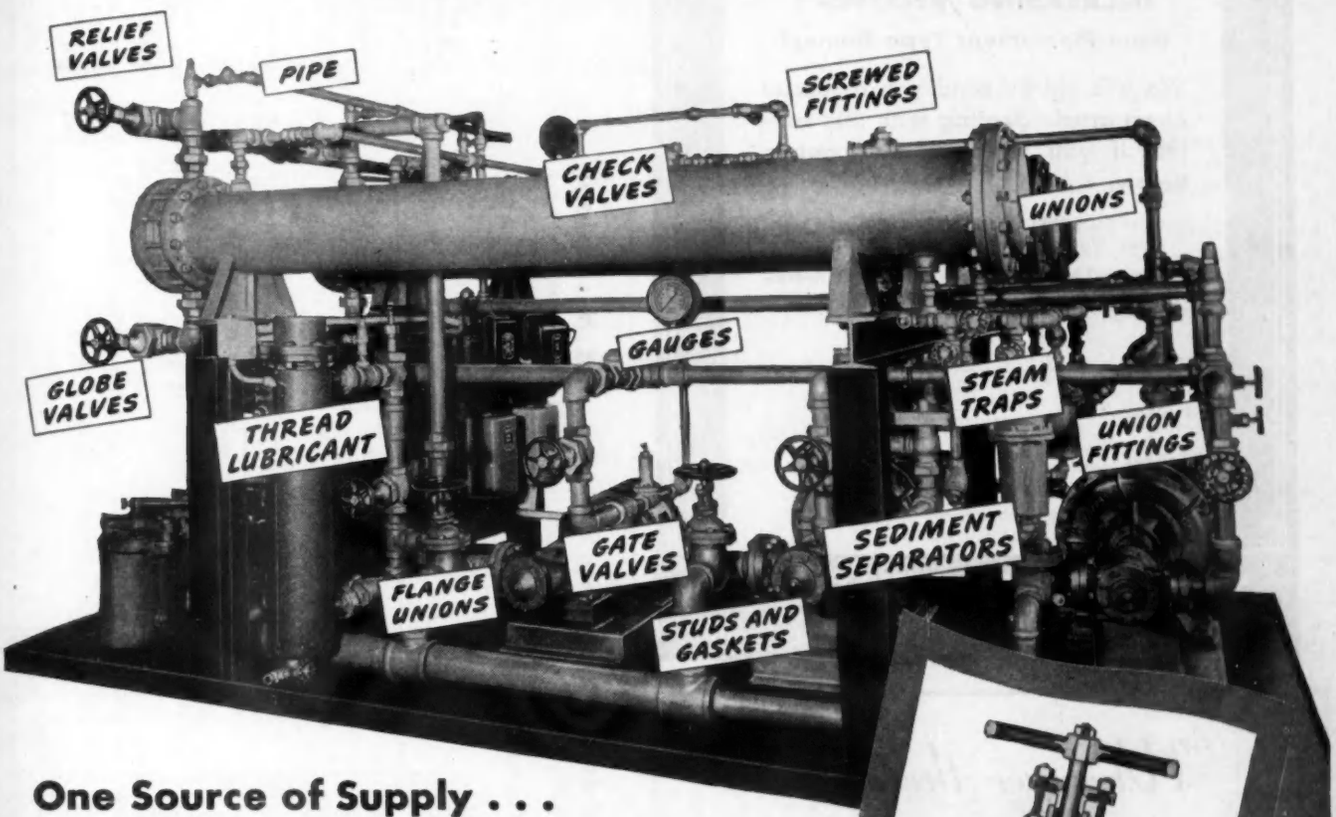
Successful large and small businesses and successful workmen are the result of American opportunity. Any theory of government which destroys rewards for private enterprise destroys what the American boy is living for.

Southwestern Gas and Electric Company, a business-managed, tax-paying business, was builded by American boys with the opportunity of private enterprise.

SOUTHWESTERN
GAS & ELECTRIC COMPANY

. . . . General Offices: Shreveport, La. . . . .

Complete systems or single fittings . . . Crane meets every piping need

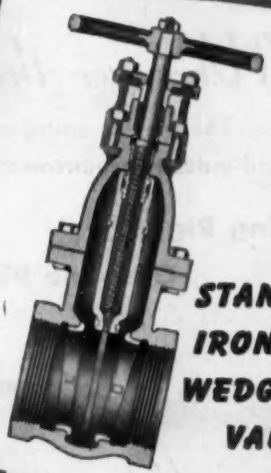


One Source of Supply . . . One Responsibility for Materials

In buying day-to-day piping needs—or when you're planning complete new systems—the benefits of single source supply can be yours. Crane supplies everything for piping—valves, fittings, pipe, and all accessories—as indicated by the installation above. And where can you expect more complete selection than in the world's largest line of flow-control equipment for every service.

Ordering—handling parts stocks—maintenance—all these operations are simplified when you Crane equip. More important, one responsibility for quality and craftsmanship of piping materials is a primary aid to good installation. Crane meets that responsibility with 89 years of manufacturing experience.

CRANE CO., 836 S. Michigan Ave., Chicago, Ill.



STANDARD IRON BODY WEDGE GATE VALVES

One Standard of Quality . . .

Because there is adequate quality in every part, the whole system is thoroughly dependable when it's Crane equipped. Such quality is typified by Crane Iron Body Gate Valve design: Strong body sections resist severest line strains. Straight-through ports give streamline flow. A deeper stuffing box lengthens packing life. Extra long guides keep disc travel true, while balanced stem design maintains smooth and positive operation.

CRANE

VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

Are you interested in INCREASING RECOVERY from Piercement Type Domes?

We will gladly send you a reprint of an article dealing with this subject if you will use the coupon below.

SPERRY-SUN WELL SURVEYING CO.,
1608 Walnut St., Philadelphia 3, Pa.

Kindly mail me a copy of "Directional Redrilling of Piercement Type Dome to Increase Recovery."

Name_____

Position_____

Company_____

Address_____

O.W.

SPERRY-SUN

SPERRY-SUN WELL SURVEYING CO.

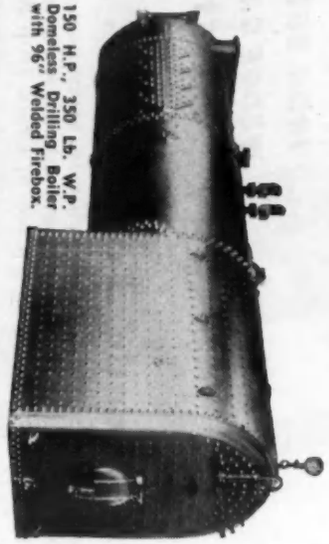
HOUSTON, TEXAS PHILADELPHIA, PA. LONG BEACH, CALIF.

"Wherever there's oil"

There is a suitable Lucey Boiler for every oil industry requirement.

Drilling Rig **Refinery**

Gasoline Plant



150 H.P., 350 Lb. W.P. Domeless Drilling Boiler with 96" Welded Firebox.

- Seamless Fire Box
- Short Tubes
- Light Weight
- Large Fire Box
- Fast Steaming

LUCEY

LUCEY PRODUCTS CORPORATION

OIL WELL SUPPLIES

TULSA, OKLAHOMA

Salient Data on Oil Fields of Alabama, Florida, and Mississippi

Field, County	Location	Discoverer	Date Discovered	CRUDE OIL PRODUCTION (Barrels) Production April 1, 1944 No. of Wells	Production April 1, 1944 Barrels Daily	Year 1943	3 Months, 1944	From Discovery Through March, 1944	Gravity of Oil	*Initial Daily Prod. of Discovery Well	Producing Horizon (Feet)	Name and Character of Producing Formations (All are Upper Cretaceous in Age, Except as Noted)	Wells Drilling on April 15, 1944 Dr.	R.U.	Total
ALABAMA															
Gilbertown, **Choctaw**	sw ne 2-10n-4w	Hunt Oil Co.	2-15-44	1	100	.....	1,116	1,116	20.0	F 60	2560- 2580	Selma sandy line	2	..	2
FLORIDA															
Sunniland, **Collier**	sw se 29-48s-30e	Humble Oil & Refg. Co.	11- -43	1	50	4,037	5,108	9,145	20.0▼	P 50 oil, 50 wtr.	-11625	Young (Glen Rose) dolomite, Lower Cretaceous	1	..	1
MISSISSIPPI															
Brookhaven, **Lincoln**	nw 4-7n-7e	California Co.	7-13-43	1	.....	15,850	186	16,036	26.0	P 137; 1¼"	10288-10322	Lower Tuscaloosa sand	1	..	1
Cary, **Sharkey**	23-11n-7w	British-American	9-16-41	1	50	25,670	4,480	40,650	24.8	P 35	3270- 3275	Selma gas rock	..	..	..
Cranfield, **Adams**	52-7n-1w	California Co.	6- 2-43	2	600	10,460	35,902	46,362	(44.0) (56.0)	F 104; ¼"	5880- 5888 10226-10276	Wilcox sand, Eocene Lower Tuscaloosa sand	3	..	3
Eucutta, **Wayne**	34-10n-9w and 2-9n-9w	Gulf Refining Co.	5-14-43	3	150	2,550	3,100	5,650	19.0	P 63	5050- 5135 6666- 7095	Eutaw sand Lower Tuscaloosa sand	3	2	5
Flora, **Madison**	ne 2-8n-1w	Love Petroleum Co.	8-22-43	3	50	4,850	3,564	8,414	....	F 135; ¼"	4360- 4367	Selma gas rock	..	..	..
Heidelberg, **Jasper**	sw se 30-1n-13e	Gulf Refining Co.	2- 7-44	1	250	.....	18,089	18,089	19.0	F 408; ⅝"	4958- 4968	Eutaw sand	2	2	4
Jackson Gas, **Hinds-Rankin**	T. 5-6n, R. 1-2e	Jackson O. & G. Co.	2-16-30	....	.....	.....	.....	.....	....	Gas	2420- 2435	Selma gas rock	..	..	..
Pickens, **Madison-Yazoo**	T. 11-12n, R. 3e	Kingwood Oil Co. and Exchange Oil Co.	4-22-40	35	5,400	1,451,300	483,953	2,909,103	39.9	F 1013; 2" open tubing	4830- 4884	Eutaw sand	..	..	..
Tinsley, **Yazoo**	T. 10-11n, R. 3w	Union Producing Co.	9-21-39	330	35,000	17,316,200	3,435,600	68,533,600	(31.6) (49.6)	F 460; ¼"	4378- 4900 5761- 5786 6200- 6236	Selma sand Eutaw sand Upper Tuscaloosa sand	..	..	..
Total Mississippi Fields	.....	.....	.....	375	41,500	18,826,880	3,984,874	71,577,904	....	.....	.....	.....	..	4	16

* Barrels oil per day, flowing (F) or pumping (P); size of choke given n inches.

Since 1867

We've supplied Southern Industry with everything needed to keep the wheels turning. We take pride in knowing that our vast stocks and facilities to serve, have been at the disposal of the great Petroleum Industry.

Woodward, Wight & Co. LTD.

THE LARGEST GENERAL SUPPLY HOUSE SOUTH SINCE 1867

NEW ORLEANS, LA.

RA. 1231 L.D. 17

WIRE - PHONE - WRITE · OPEN DAY AND NIGHT

before quitting at 11,230 feet, probably in Travis Peak of basal Lower Cretaceous.

To the south of the Sharkey County and Jackson uplifts and to the west of the Hatchitigbee Anticline and McHenry High is the promising structural basin of salt domes and other local structures, in which have been opened the Cranfield, Brookhaven, Heidelberg, and Eucutta fields in which numerous local structures have been defined.

These fields of central and southern Mississippi and southwestern Alabama so far are producing from four different formations, mentioned above: the Eocene Wilcox and Selma, Eutaw, and Tuscaloosa of the Upper Cretaceous.

In southernmost Alabama, structural as well as stratigraphic conditions are expected to be similar to those in southeastern Mississippi.

In southern Georgia, potentially productive formations exist, but little is known about local structural conditions. In the southwestern corner of Georgia and the northwestern portion of Florida is the down-warped, regionally-low Appalachicola Basin, and farther east, in central northern Florida is the large Ocala Uplift, which may affect subsurface conditions in southern Georgia as well as those over a wide area embracing a third of the Florida peninsula, having brought potentially productive lower formations close to the surface.

Although marked by this hump at the north end, the whole peninsula of Florida is structurally high down the middle, to the keys, with this central backbone sloping to the south, while known irregularities exist to the east

WHITNEY NATIONAL BANK
OF NEW ORLEANS

ESTABLISHED 1883

STATEMENT OF CONDITION AT THE CLOSE OF BUSINESS THURSDAY, APRIL 13, 1944

RESOURCES		LIABILITIES		
Cash and Due from Banks	$ 71,445,016.40	Deposits		$262,947,424.60
U. S. Government Obligations, Direct and Fully Guaranteed	143,257,658.14	Acceptances Account of Customers and Letters of Credit		925,618.23
State, County and Other Public Bonds	13,872,415.56	Dividend Declared, Payable July 1, 1944		84,000.00
Other Bonds and Securities	1,015,779.21	Accrued Interest, Expenses and Reserves		383,730.80
Loans, Discounts and Acceptances	42,033,168.12	Capital	$2,800,000.00	
Customers' Liability Account of Acceptances and Letters of Credit	555,477.98	Surplus	7,200,000.00	
Stock of Federal Reserve Bank	300,000.00	Undivided Profits	2,876,033.65	12,876,033.65
Accrued Income Receivable and Prepaid Expenses	631,671.61			
Banking House, Furniture and Fixtures	3,043,444.67			
Branch Banking Houses	754,414.43			
Other Real Estate	307,761.16			
TOTAL	$277,216,807.28	TOTAL		$277,216,807.28

MEMBER OF THE FEDERAL DEPOSIT INSURANCE CORPORATION

* Barrels oil per day, flowing (F) or pumping (P); size of choke given in inches.

SOLVE
Boiler Scale and Corrosion
The Modern
SAND-BANUM
Way
16-Ounce Can
ALL ACTIVE INGREDIENTS

"The Entirely Different Boiler and Engine Treatment"
promote boiler life and efficiency by the consistent use of
SAND-BANUM
Write for the Facts
AMERICAN SAND-BANUM COMPANY, Inc.
9 Rockefeller Plaza, New York City 20
Stocks carried by
WESTERN SAND-BANUM COMPANY
Houston, Texas
and at other convenient points including leading supply houses
Export Representatives
PETROLEUM MACHINERY CORP.
30 Rockefeller Plaza New York City 20

Streamlined Cementing Equipment

Pats. 2,258,052 2,220,237
Weatherford is out with Streamlined Casing Centralizers and Scratchers for extra close clearances. On 4¾" pipe, for instance, the Centralizer will run in a 5⅝" well bore. Yet all Weatherford Centralizers are available with collapsible maximum spread of 10", 5" or 3" over the pipe size. Because of marked variations in any well bore, perfect cement jobs depend on equipment with wide tolerance. Streamlined Weatherford Centralizers and Scratchers are the answer. Ask about them.
WEATHERFORD
SPRING COMPANY
Weatherford, Texas, U. S. A.
We will gladly stock your favorite supply store with WEATHERFORD products if it doesn't already have them

Geophysical Crews at Work in Southeastern States on April 1, 1944

STATE	Reflection	Gravity Meter	Magnetometer	Total
Alabama	*4	†8	..	12
Florida	2	14	..	16
Georgia	2	..	1	3
Mississippi	33	16	1	50
Total	41	38	2	81

* In Baldwin, Choctaw, Geneva, and Escambia Counties.
† In Conecuh, Choctaw, Clarke, Covington, Escambia, Monroe, Rhodes, and Washington Counties.

and west of the main feature. The Sunniland one-well field, Collier County, at the southwest corner of the peninsula, so far is Florida's only oil field, and it produces 20 gravity oil at 11,625 feet from the Lower Glen Rose formation of the Lower Cretaceous, which also has yielded shows of oil and gas in deep tests in Mississippi. That formation also is an important pay in numerous fields of Arkansas, North Louisiana, and Eastern Texas, of which Rodessa is an outstanding example.

Area Has 10 Oil Fields

In the coastal region of the Southeastern States there are now 10 oil fields and 1 gas field which ultimately may produce oil, all being in the south half of Mississippi except the Gilbertown oil field in southwestern Alabama and the southern Florida oil field.

All of these oil fields have been discovered within the past 5 years and all but 3 within the past year. Systematic exploration is only now commencing in earnest, although desultory wildcatting began 40 years ago. Development has proceeded from west to east—from established fields of Louisiana into the virgin regions, and the first limited success included discovery of the Amory gas field in 1926 and the Jackson gas field in 1930. But it was not until discovery in 1939 of the first oil field, Tinsley, Mississippi, which proved to be a major field, that the region was generally recognized as having possibilities for major production. Then the first concerted development started. But the broadened interest waned when four years brought only two Mississippi discoveries: Pickens in 1940 and Carey in 1941, both in the general vicinity of Tinsley. And it remained for the 7 discoveries of the latter half of 1943 and early 1944 to put the region on the map definitely as a potential province of major fields.

Pays Equivalent to Those in Southwest

The previously mentioned important Cranfield field in the southwestern corner of Mississippi, near the Louisiana border, is producing high gravity oil at 5900 feet from Wilcox sand of Eocene age, a formation which produces also in such fields as Ville Platte, South Louisiana, and fields of the "Wilcox trend" of the interior border of coastal Texas. The Wilcox so far is productive in the Southeastern States only at Cranfield, but it is present and thick across southern Mississippi and in southern Alabama and Georgia and also has been identified in Florida.

The four oil fields and 1 gas field on or adjacent to the Sharkey County and Jackson uplifts, central Mississippi, are producing wholly from the Selma and Eutaw formations of the upper Cretaceous, with exception of the third pay at Tinsley, which is Upper Tuscaloosa, also of Upper Cretaceous age.

The Selma, logged as chalk, limestone, or sand, is the equivalent of Texas-Louisiana-Arkansas formations of the Navarro-Taylor groups, which have yielded large production, mostly at 300 to 1000 feet, in some of the early fields of Arkansas, North Louisiana, and Eastern Texas, such as Smackover, Caddo, and Corsicana. The Selma is productive as gas rock in the Jackson gas field at 2400 feet and as limestone, sandy limestone, or sand, in the Tinsley, Cary, and Flora oil fields, central Mississippi, at depths of 3200 to 4400 feet, yielding 25-30 gravity oil. The Selma also furnishes the 20 gravity oil production of the new Gilbertown oil field, southwestern Alabama, at 2600 feet.

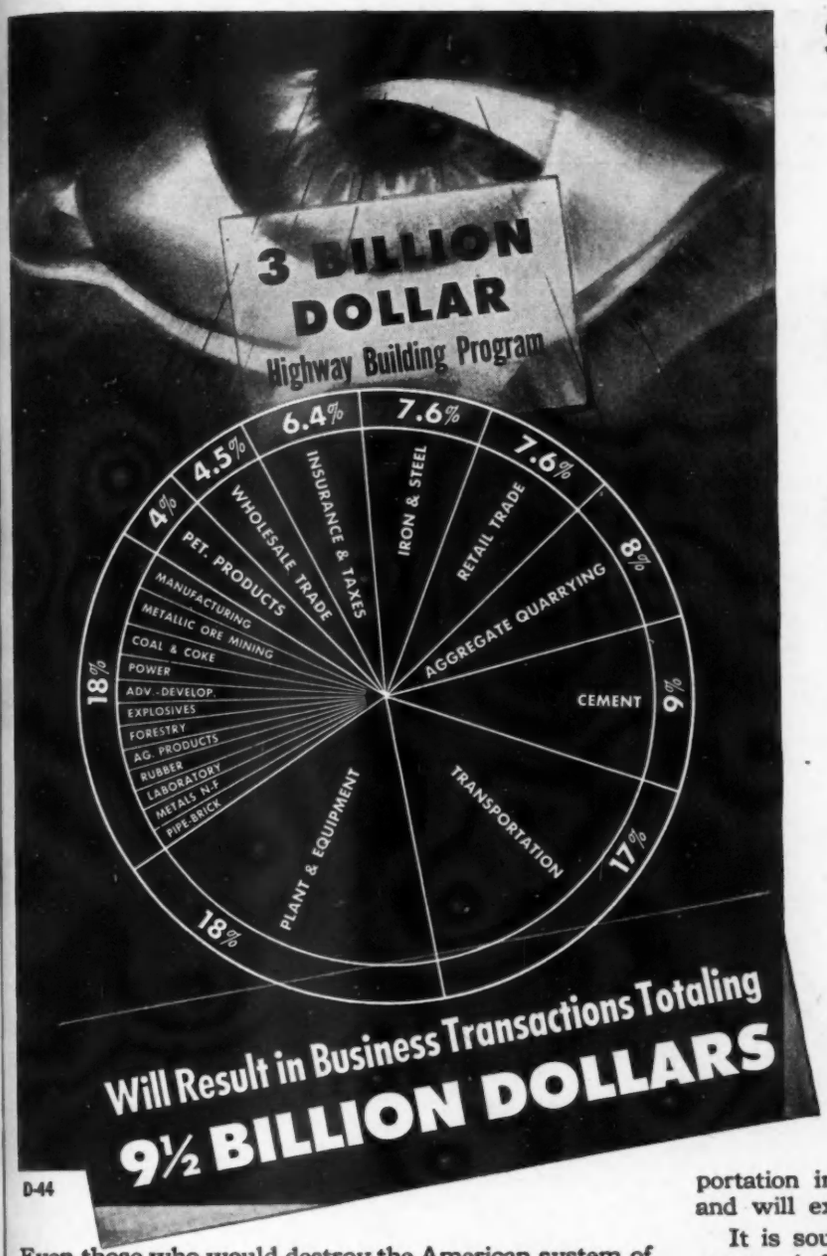
The Eutaw formation, predominantly sandstone and shale, is the age equivalent of the Brownstown-Tokio section of Arkansas, Louisiana, and Texas, which has yielded important production at depths around 2000 feet in numerous North Louisiana fields, including Caddo, and at somewhat greater depths in such Arkansas fields as Smackover. The Eutaw yields the 40-gravity oil production of the Pickens field, Mississippi, at 4850 feet and similar high-gravity oil at similar depth in the adjacent Tinsley field. Eutaw also is the pay in the rich, new, 4950-foot Heidelberg field, southeastern Mississippi, and is productive in the adjacent Eucutta field at 5100 feet, although it yields relatively heavy oil (19 gravity) in both those fields, of that general area of southeast Mississippi-southwest Alabama, as do the Selma at Gilbertown (20 gravity) and the Lower Tuscaloosa at Eucutta.

Beneath the Eutaw is the Tuscaloosa formation, oldest of the Upper Cretaceous sediments, consisting of sands and shales, and yielding oil in three Mississippi fields. The Upper Tuscaloosa produces at Tinsley at 5750 to 5800 feet. The Lower Tuscaloosa produces 26 gravity oil in the Brookhaven field, 75 miles to the south of Tinsley, at 10,288 feet; gave up some 56 gravity oil and much gas, on test, at Cranfield, 40 miles west of Brookhaven, at 10,383 feet; and is yielding heavier crude oil in the Eucutta field, 100 miles to the east of Brookhaven, at the 7000-foot level. The Tuscaloosa is of particular interest because that formation is the age equivalent of the Eagleford-Woodbine, which has furnished numerous prolific fields in Louisiana and Texas, including the East Texas field. Characteristics of the Tuscaloosa formation are similar to those of the Woodbine of Texas, and porosity of producing sands usually is good.

Although wells drilled in the northern portion of the Mississippi-Alabama coastal belt have gone directly out of the Upper Cretaceous into the Paleozoic rocks, with Lower Cretaceous and Jurassic beds missing, as mentioned before, those latter groups of formations have been found present farther south, where one of them already is productive while others are potentially productive.

The top member of the Lower Cretaceous, lying below the Tuscaloosa, offers possibilities as a pay horizon in the region, as attested by shows of oil found in it in Mississippi. The Paluxy is productive in many fields of Arkansas, North Louisiana, and Eastern Texas, including Caddo, Sulphur Bluff, Talco.

Under the Paluxy lies the Glen Rose formation of the Lower Cretaceous, consisting of limestone, shale, and an-



D-44

$s × $s = Worthwhile Jobs

Giant Stride to Keep Free Enterprise FREE

PROPOSED BY AMERICAN ROAD BUILDERS' ASSOCIATION

Even those who would destroy the American system of free enterprise must credit it with the greatest war production record the world has ever known.

But, that is not enough to keep free enterprise free. No segment of industry can afford to relax when the pressure of war is off. Nothing short of full employment will make freedom of enterprise secure through many difficult post-war years.

Because it is a basic and a giant stride toward this "must" goal, we urge all industry to get behind and push forward the planned peacetime program of the American Road Builders' Association.

It is sound because its proposed 3 billion dollar annual investment in highways multiplies to eventually result in business transactions totaling 9½ billion. (See chart above based on studies by U. S. Public Roads Administration.)

It is sound because it is capable of directly employing 3 million persons quickly and of contributing indirectly to the supporting of many more million jobs. (The highway transportation industry alone normally employs 7,000,000 and will expand with highway construction.)

It is sound because the economic structure of the country is built around the motor vehicle and will become more dependent upon it. Gasoline rationing forcibly brought this fact home.

It is sound because our highway system is inadequate, has suffered from heavy war traffic, weathering and limited maintenance.

It is sound because registration fees, gasoline taxes, municipal and county taxes, Federal user taxes, personal property taxes and tolls, if all used for highway purposes, would eventually be sufficient to build and maintain the highway system.

It is sound because it provides for competitive bids by contractors of experience. This insures higher efficiency, better construction at lower costs than can be obtained by the force account system of work relief.

The American Road Builders' Association, 1319 F St. N. W., Washington 4, D.C., has made a fourth printing of a 64-page book entitled "A Sound Plan for Postwar Roads and Jobs." We suggest that every American write for it—to the Association direct or to—

union Wire Rope corporation

Tulsa • Houston • Chicago • Salt Lake City • New Orleans 2104 Manchester Ave., KANSAS CITY, MO. Monahans, Tex. • Portland, Ore. • Ashland, Ky. • Atlanta

Formations Drilled in Southeastern States and Fields Producing from Them and from Their Equivalents in Louisiana, Texas, and Arkansas

Generalized Stratigraphic Section for Southeastern States (Mississippi, Alabama, Georgia, Florida)				Some Fields Where Producing Oil and Depths at Which Productive			
Era	System	Series	Formation	Mississippi	Louisiana	Arkansas	Texas
Cenozoic	Quaternary	Recent	Alluvium				
		Pleistocene	Port Hudson Natchez Citronelle				
	Tertiary	Pliocene	Not Present		Starks 575		Big Creek 800
		Miocene	Pascagoula Hattiesburg		Most of Gulf Coast fields, 1000 to 12,000 ft.		Saxet 1000—3200 (Lagarto-Oakville)
			Catahoula (*Frio etc.)				Spindle Top 5900 Many other fields
			Limestone Group				
		Oligocene	Vicksburg		Port Barre 3600		Thompsons 7800 Saxet 9900
		Eocene	Jackson (*McElroy, etc.)				Raccoon Bend 3500 Mirando 1500
			Claiborne (*Cockfield, Sparta, etc.)		Cheneyville 5500 Lake St. John 2150		Conroe 5200 Pettus 3900 Government Wells 3000
			Wilcox	Cranfield 5900	Lake St. John 4600 Ville Platte 11,500		Lake Creek 9800 Livingston 7000
			Midway				
Mesozoic	Cretaceous	Upper Cretaceous (Gulf)	Arkadelphia (*Upper Navarro)				
			Ripley (*Lower Navarro: Nacatoch-Saratoga)		Bellevue 425 Caddo 1000 Homer 1400	Smackover 2000 El Dorado 2175 Lisbon 2100	Corsicana 1250 Waskom 800 Pickering 1500
			Selma (*Taylor Group: Marlbrook, Annona-Pecan Gap, Ozan)	Tinsley 4900 Cary 3275 Flora 4350 Jackson 2450 (Gilbertown, Ala. 2575)	Zwolle 2500 Elm Grove 1750	Bradley 2800	
			Eutaw (*Brownstown-Tokio or Austin Chalk)	Tinsley 5775 Pickens 4850 Heidelberg 4950	Caddo 2100 Haynesville 2900 Sligo 2600	Champagnolle 2800 Smackover 2600	Marion County 2350 Shelbyville 3350
			Tuscaloosa: Upper (*Eagle Ford)	Tinsley 6200			
			Lower (*Woodbine)	Cranfield 10,275 Brookhaven 10,300 Eucutta 7100			East Texas 3700 Hawkins 4900
		Lower Cretaceous (Comanche)	Washita (*Buda, etc.)		Bethany 2500		Falls County 1200
			Fredericksburg				
			Trinity Group: Paluxy	Oil shows	Bull Bayou 3500 Caddo 2600 Converse 3400	Fouke 3650 Garland City 2950	Talco 4300 Sulphur Bluff 4500 Cayuga 5700
			Upper Glen Rose				Opelika 8025 Angelina County 4100
			Lower Glen Rose: Rodessa (James, Young, etc.)	(Sunniland, Fla. 11,625)	Rodessa 6100 Cotton Valley 4700 Haynesville 4400		Cayuga 7600 Opelika 8175
			Pine Island (Sligo, Pettit, etc.)		Haynesville 5650 Lisbon 5300	Haynesville 5500	Carthage 5900 Larissa 10,212
			Travis Peak (*Hosston)		Cotton Valley 5800 Lisbon 5400	Champagnolle 3350 Urbana 3600	Waskom 6150 Pittsburgh 8200
	Jurassic	Jurassic	Cotton Valley		Cotton Valley 8650 Lisbon 8800	Schuler 5500-7600 McKamie 7250	
			Buckner				
			Smackover (including Reynolds)		Lisbon 10,400	Smackover 4950 Schuler 8900	
			Eagle Mills				
Paleozoic	Carboniferous	Pennsylvanian	Pennsylvanian			Gas in nw Ark. 1000-3800	Denton County 1700 Grayson County 4200
		Mississippian	Mississippian	Armory Gas 2400 (Gas in nw Ala.)			

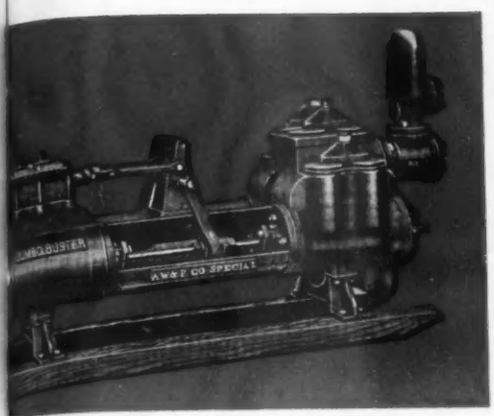
* Equivalent in La.-Ark. and/or Texas.

hydrite, and extending through the Southeastern States and under Florida. The Lower Glen Rose has yielded showings of oil and gas in deep tests in Mississippi and is furnishing the production of the discovery well of the Sunniland oil field of southern Florida. Although best known as the pay of the Rodessa field, the Glen Rose also is productive in numerous other Arkansas-Louisiana-Texas fields.

Beneath the Glen Rose lies the Travis Peak, lowermost of the Lower Cretaceous formations, encountered in deep wildcats of southern Mississippi, and established as an oil pay in various Arkansas and Texas fields, including Champagnolle and Waskom.

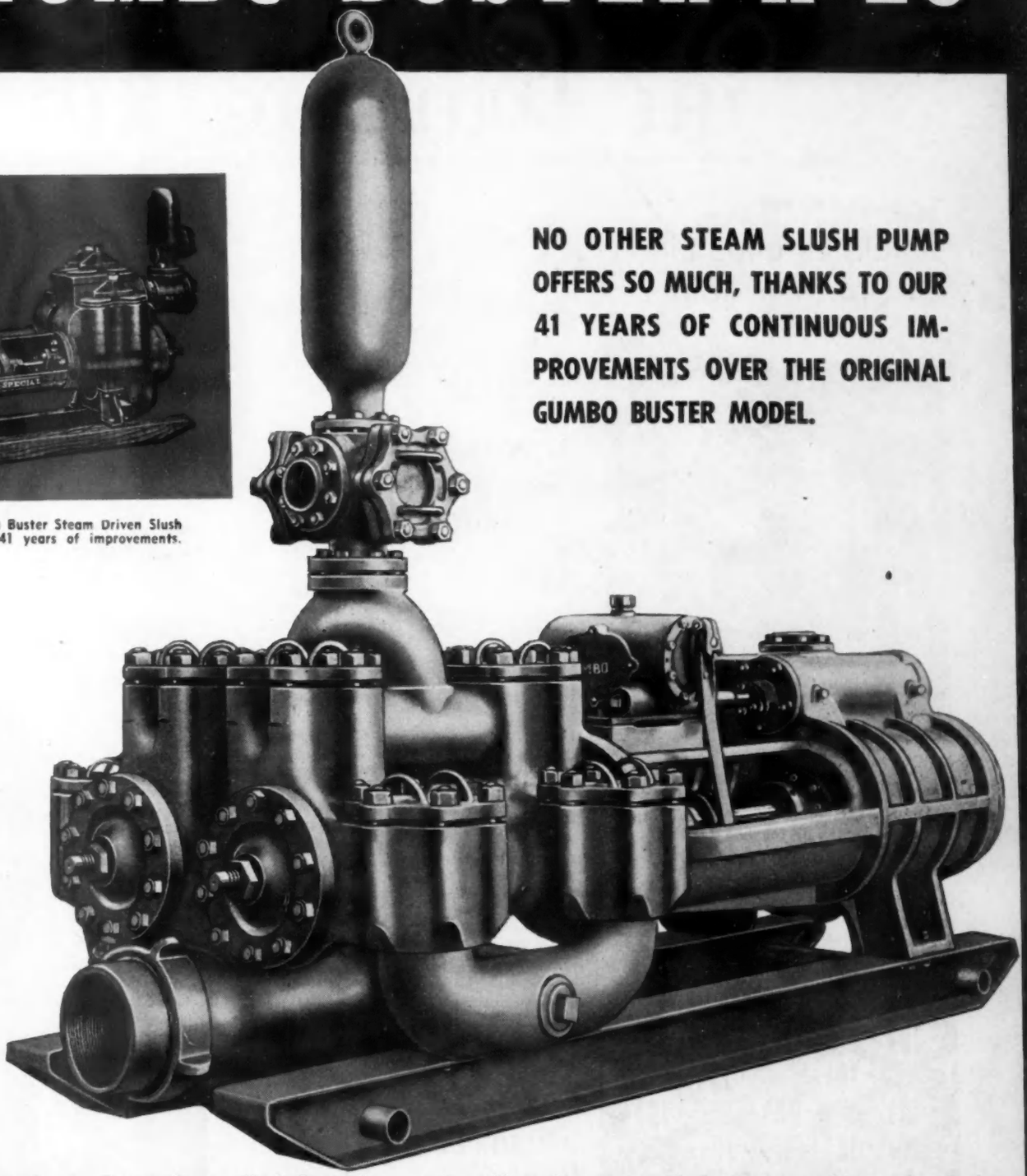
The still older formations of Jurassic age also have been encountered in deep drilling of southern Mississippi, and some of them being important pays in Arkansas and North Louisiana, they offer possibilities in the Southeastern States. The Jurassic formations are, from top to bottom, the Cotton Valley sandstone, Buckner, Smackover limestone, salt, and Eagle Mills. The Cotton Valley sand and Smackover lime are deep pays in Cotton Valley, Lisbon, Schuler, Dorcheat-Macedonia, and other newer and prolific fields of North Louisiana and Arkansas.

The GUMBO BUSTER K-20



Original 1902 model Gumbo Buster Steam Driven Slush has been succeeded by 41 years of improvements.

NO OTHER STEAM SLUSH PUMP OFFERS SO MUCH, THANKS TO OUR 41 YEARS OF CONTINUOUS IMPROVEMENTS OVER THE ORIGINAL GUMBO BUSTER MODEL.



Our Army-Navy "E" Flag now includes the white star for continued excellence of war production.

We built the first Gumbo Buster Steam Slush Pump in 02 . . . size, 8" x 5" x 10"; weight, 2,000 pounds; price, 35.00. It got the job done in its day, but never a year has ssed since it was produced that we haven't made slush pump provements. Type K20, reproduced above in contrast to our 02 model, is Gumbo Buster's answer in steam pumps today.

This 16" x 8½" x 20" pump has a high test steel fluid d, built for compounding highest pump pressures. The steam d and housing are cast integral. Design of steam end ures greatest steam economy. Fully enclosed oil bath mechanism. No other steam slush pump combines all of the advantageous features offered in this pump.

Other steel fluid end steam slush pumps manufactured by Gumbo Buster include the Type N, 18" x 8½" x 20" . . . Type M, 14½" x 7½" x 18" . . . Type L Boiler Feed, 10" x 4½" x 10".

Bulletin No. 87 gives full details of Type K20. Your new Composite Catalog, off the press soon, describes complete Gumbo Buster line of rotary drilling equipment.

THE AMERICAN WELL & PROSPECTING CO.

GUMBO BUSTER

CORSICANA, TEXAS

DISTRIBUTED BY:
Republic Supply Co., Houston
Bethlehem Supply Co., Tulsa

EXPORT OFFICE:
Petroleum Machinery Corp.,
30 Rockefeller Plaza, N.Y.C.

PRACTICAL OPERATING *Hints* FOR THE DRILLING RIG

$5.00 will be paid for each illustrated acceptable contribution. Mail to The Editor, THE OIL WEEKLY, *Houston*

1. *EQUIPMENT*

Shield Extends Life Of Universal Joints

Cover of light metal encloses joint and extends life of flexible coupling in shaft.

THE universal joints used between lay shaft and magneto or generator on an internal combustion engine may be protected against damage, and a possible accident hazard also removed, by forming a light shield to cover the exposed shaft.

One operator fashioned such a shield from a 5-gallon can, cutting the metal away to conform to the shape of the timer support, and bending a flange on the outer end which, when perforated to match, permitted the timer-gear cover bolts to act as means for attaching the cover to the engine.

The shield is readily removed for inspecting or servicing the adjacent units, and is much more easily kept clean than is the assembly it covers.

2. *WIRE GUYS*

Group Line Anchors Simplify Stringing

IN TOWNLOT and other congested drilling it is frequently desirable to attach two or more guys to a single deadman, in order to conserve space and prevent the aerial confusion caused by guys crossing or strung close to adjacent servicing derricks.

By burying a timber, pipe or other anchor with two ties or bolts instead of the customary one, a second transverse member may be placed above ground, and held at the desired level by nuts above and below the unit.

Spacing of the various guy loops on the above-ground anchor is attained by welding loops or straps along the pipe member at the points where the guys are to be set, each guy being threaded through the proper loop before being clamped or spliced.

Guys thus segregated are kept from chafing against each other, and the distribution of load across the unit is assured; in contrast to the concentration which might occur at one end or the other, were the three guys permitted to work across the anchor and collect only when restrained by a bolt.

3. *SAFETY*

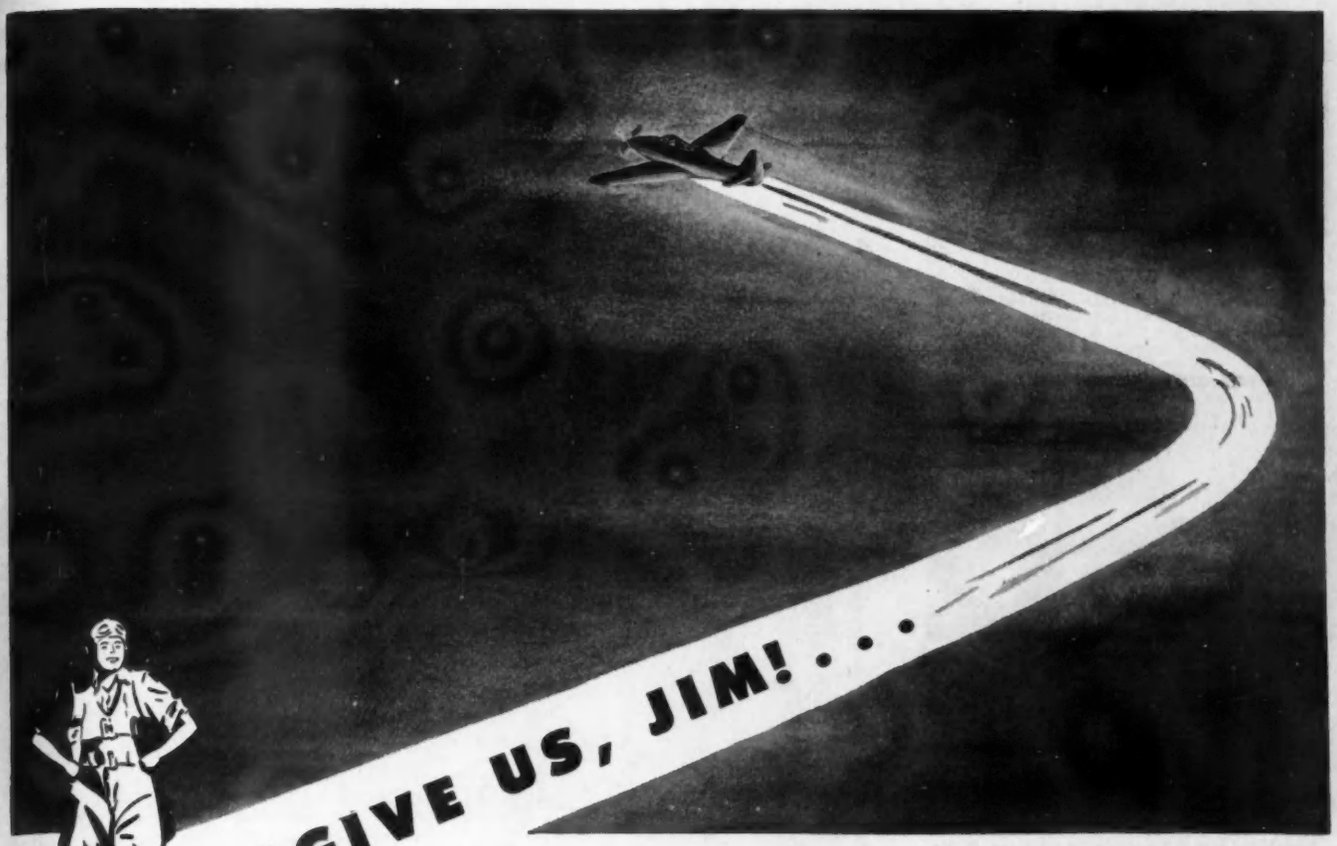
Steam Line Guard Prevents Accidents

EVEN though the drilling engine steam line be lagged or otherwise insulated from throttle to floor level, it still is too hot to be contacted, while the flanges of the various joints, rarely included in the jacketing, present a constant menace to the wellbeing of the crew.

One company utilizes a section of light tank steel, formed to a curve or arc of extent ample to cover two sides of the lagged steam line, equipping the base with brackets which may be fastened to the floor with bolts, lag screws, or simply by nails driven through the perforations lining the outer edge of the bracket. The upper end of the guard or pipe shield is provided with two or more ears or brackets, projecting inwardly at the proper height to allow the inner end to be slipped over a pair of the flange bolts in the steam line, there to be held rigidly by the flange nuts, and thus to maintain the desired spacing between pipe and guard to allow of dissipation of the heat. The guard, though plenty warm to the bare

Bracketed on steam riser, this shield is air-cooled enough to prevent burns if contacted.

BROWN
CUTTING & FISHING TOOLS
At your service 8,760 hours a year!
BROWN OIL TOOLS, INC.
Houston • Corpus Christi • Lake Charles
New Iberia • Houma



FORGIVE US, JIM! . . .

● We know a young fellow who used to write advertisements for industrial equipment. He's a pilot now. Where he is today we don't know. But we do know that he has learned a lot more about how it feels to be hanging out there in space than us fellows know who sit, with graying hair and heavy spectacles, trying to handle the job he left behind.

And if, in his daring task, he finds time to glance at some of the advertisements which imply, more deliriously than subtly, that the Blank Corporation's Gadget stands between him and eternity, we suspect that he gets a little disgusted . . . at least until that saving sense of humor we know so well, gets the better of his disgust.

We suspect, too, that if we could say to him, "Jim, what *are* the true facts about that plane you're flying?", he would answer something like this:

"Well, fellows . . . it's all right . . . its got a little edge on the enemy's planes, and that's something of course . . . but if you were in this spot you'd want it about ten times as good as it is all the way through! The instruments? . . . Oh, why go into details? . . . I didn't even know my old friends at Jas. P. Marsh made some of 'em! . . . But now that you bring it up, the same thing goes for you that applies to everyone else who had a hand in making this ship . . . Make your stuff better and let its performance tell the story!"

We get you, Jim! And we're not alone in this, either. Few, if any, are the men and manufacturers back home who aren't doing their level best to make their little part "ten times better than it is." Honestly, Jim, they're *with* you.

But if in our desire to do the job better and better, we get an exhalted opinion of ourselves and reflect it in our advertising . . . forgive us! You know how it is, Jim; you used to write advertisements yourself!

With all deference to Jim, we believe it can be truthfully said that the Marsh slogan "The Standard of Accuracy" is not simply our own appraisal of Marsh Gauges. Men in the oil industry who have rubbed elbows with all kinds of gauges will tell you that Marsh *does* set "the standard of accuracy." The Marsh Masterguage, above, represents the Marsh Gauge in its highest development.

JAS. P. MARSH CORP., 2068 Southport Ave., Chicago 14, Ill.

MARSH GAUGES

THE STANDARD OF ACCURACY

DIAL THERMOMETERS HEATING SPECIALTIES

Young
DRILLING ENGINES MAKE FRIENDS FOR LIFE

If you have chosen a YOUNG Drilling Engine for the first time today, you can feel sure that the choice was a wise one. A year from today—or ten years from today, when you review your experience with this substantial, trustworthy, and economical machine, you will know how profitable your choice has been.

GAS • DIESEL • GASOLINE

YOUNG ENGINES MAKE YOUR DRILLING DOLLARS GO DEEPER

YOUNG ENGINE CORP.
CANTON, OHIO

A. E. Avers, P. O. Box 606, Tulsa, Oklahoma
Iverson Tool Co., Texas, Artesia, New Mexico
Branchland Pipe & Supply Co., Huntington, W. Va.
Connelly Machy. Co., Billings & Great Falls, Mont.

OTHER YOUNG PRODUCTS
Natural Gas Carburetors • Orifice Gas Well Testers
Under-Road Boring Machines • Electric Light Plants

65 Years Building
CHAINS

That length of experience means something. Jeffrey Oil Well Chains continue to represent the highest quality of manufacturing skill and engineering knowledge combined with the latest metallurgical developments.

You can depend upon Jeffrey Chains.

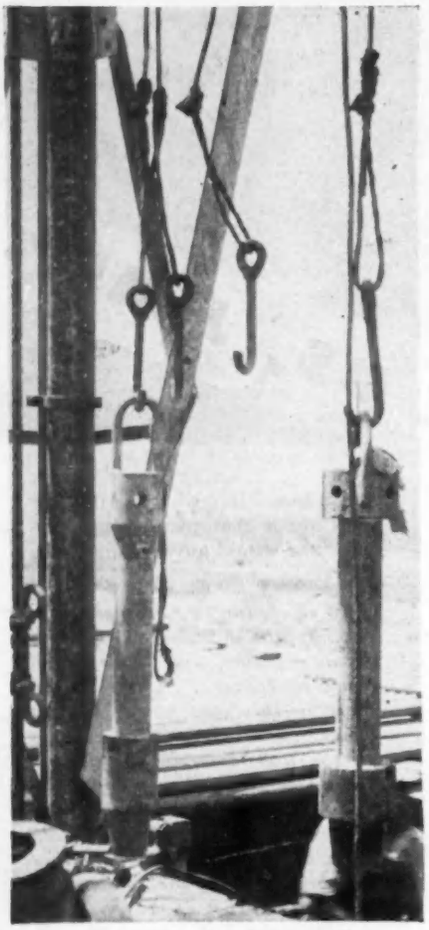
THE JEFFREY MANUFACTURING CO.
785-99 NORTH FOURTH ST., COLUMBUS, OHIO
IN HOUSTON, 6358 AUDEN STREET

hand, is not hot enough to cause serious burn through accidental contact.

The guard is stiff enough to permit a line to be carried around it and a pull put thereon with the cathead without distortion — saving the stripping away of the lagging which would occur were the line to chafe against it while under load.

4. AUXILIARIES

Standby Mounting Speeds Sub Selection



Wire-line supports, with shallow, eyeleted hooks, store subs at open side of derrick.

SPECIAL subs, such as those used for handling the swivel and for elevator use on external flush pipe, spend most of their time on the rig in storage, stacked in a corner farthest from active working space, but always exposed to possible damage on their pin threads through accidental contact with other equipment.

One method of protecting the subs is to set up a number of short wire lines from a support carried at the level of the second girt, each dependent line having at the lower end a heavy eyebolt terminating in an easily engaged hook. The subs are equipped with permanently attached lifting bails, enabling them to be handled with a loop or hook in the end of the derrick line.

To use one of these special subs, the derrick line is used to lift the desired unit from its cable support; return of the unit being made by swinging the sub bail over the desired storage hook, and slacking away until the hook engages the bail and assumes the load.

Subs thus supported are free of the floor, and therefore above the zone in which most thread damage takes place, are easily selected, and do not constitute the accident hazard present when such items are stacked in the corner of the derrick, or must be worked free of a pile of similar units lying on the floor.

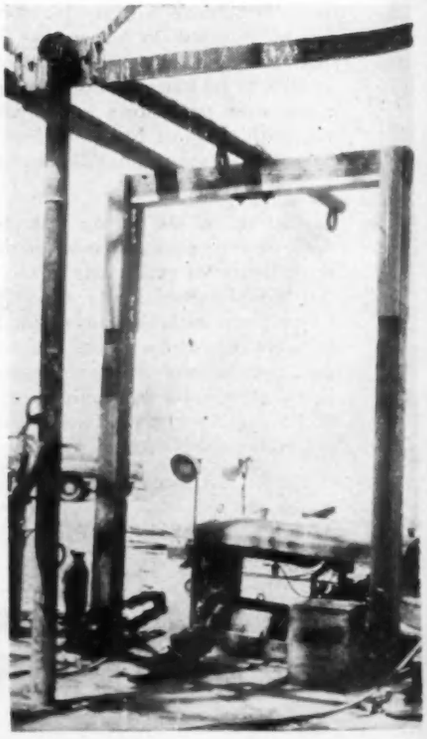
5. MATERIAL HANDLING

Chain Hoist Support Bridges Trucking Gap

AN EASILY constructed material transfer aid can be built at the rig which will expedite handling heavy equipment to and from the trucks, and at the same time relieve the work on the derrick line. The unit is out of the way of normal drilling operations, and may be so designed as to be moved in when rigging up with but one set of changes in derrick layout. A semicircular notch is cut in the gusset plate in the first girt on the side toward the roadway, the radius being that of the extra heavy pipe to be used as support for the hoist.

A second piece of pipe, long enough to carry a step and bolt to the substructure, is set through the floor to carry the end of the horizontal pipe, being held in place at the top with a U-bolt through the gusset plate. The outer end of the horizontal pipe may be supported on a pipe frame.

Eyes are welded to the horizontal pipe to afford fixed points for hanging a manually operated hoist, with a third eye being welded to the vertical member to take a snatch block to allow guiding of the derrick line when used to pull the hoist-supported load farther in toward the derrick floor.



Carried on girt and supplemental frame, this pipe affords hitch for transfer hoist or block.

Furnace, melting

Ladle, pouring

DEDMAN'S

Long Pre-war Experience

MAKING QUALITY CASTINGS FOR THE OIL INDUSTRY

PLUS

Intensified War Experience

that is being highly commended in unsolicited letters from manufacturers of war materials.

ASSURES

post-war manufacturers that they will get at Dedman's clean, sound electric steel castings that will save machining losses and please equipment buyers.

This monogram cast on all Dedman castings is your means of identification and guarantee of quality.

QUALITY ELECTRIC STEEL CASTINGS

DEDMAN

FOUNDRY & MACHINE CO.

HOUSTON, TEXAS

OWNED BY FEDERAL STEEL PRODUCTS COMPANY, A WHOLLY OWNED SUBSIDIARY OF THE RED BANK OIL COMPANY

Pipe Line Review

Big-Inch Flow Reduced By Mississippi Floods

Pumping unit 9B on the Big-Inch was washed out by the Mississippi river floods, thereby reducing its flow from 310,000 to between 260,000 barrels and 270,000 barrels per day. This station is now being moved from the danger area.

Barge shipments on the Mississippi River suffered considerably from the slow down due to flood conditions. The Texas section of the intercoastal canal was blocked for three weeks but was back in operation late last week.

Stanolind Awards Contracts For Line in Wyoming

Stanolind Pipe Line Company has awarded contracts for construction of 233 miles of 12-inch line from Elk Basin to its refinery at Casper, Wyoming. I. C. Little, Dallas, will build 148 miles, and Sharman & Allen, Houston, 85 miles. The line will have initial capacity of 15,000 barrels daily.

Preliminary work is to begin June 1 and line is expected to be in operation in 90 days.

Nebraska-Iowa Pipe Line Hearing Set for June 5

Consolidating applications of Northern Natural Gas Company for authority to construct and operate additional facilities, Federal Power Commission has called a hearing for June 5 at Chicago on the proposed construction of an 8⅝-inch, 6.84-mile pipe line from Council Bluffs, Iowa, to Douglas County, Nebraska; two short tie-in lines, and a 5200-horsepower compressing station on the company's 24-inch main pipe line in Beaver County, Oklahoma, and an additional 1000-horsepower compressor unit at its Skellytown, Texas, compressing station.

The commission has also set for hearing May 24 in Washington, applications of Interstate Natural Gas Company for abandonment of northern 40,840 feet of its 16-inch pipe line between Perryville and Alto, Louisiana, which has been out of use since November 30, last, because of changes in operating practice required by falling rock pressures in the Monroe gas field, and construction of two additional 1000-horsepower compressors at its De Siard compressor station at Fowler, Louisiana.

Lines for Haynesville Gas Project Soon to Be Built

Contract for laying 105 miles of pipe line in the Haynesville field, Clairborne, Parish, Louisiana, and Columbia County, Arkansas, to serve the gasoline extraction and recycling plant of the Haynesville Operators' committee will be let soon, J. R. Butler, Haynesville, general manager of the project, has announced.

The pipe will vary in size from 2-inch gathering lines to 20-inch mains, bringing gas to the plant for processing and returning it for reinjection to maintain field pressure.

Contract for construction of the plant has been let to the construction division of Jones & Laughlin Supply Company. Cost is estimated at $1,600,000. Location for the plant is on the H. P. Camp farm near the center of the 13,000-acre producing area. All materials have been purchased and construction will begin as soon as deliveries are obtained.

The plant will process gas from 165 wells in the field, eliminating flares. Both the Arkansas Oil and Gas Commission and the Louisiana Conservation Commission approved the plan of operation by joint agreement of all field operators to share costs of construction and maintenance.

West Edmond Pipe Line Plea Denied by PAW

Applications of five pipe-line companies for construction of pipe lines into West Edmond pool of Oklahoma and Canadian counties, was denied Thursday by PAW on the grounds that existing facilities are sufficient to handle present production. Companies involved include Sinclair Refining Company, Empire Pipe Line Company, Standish Pipe Line Company, Mercury Refining Company, and Davon Pipe Line Company. This field has 55 producers, runs approximately 11,000 barrels daily and is served by an 8-inch carrier operated by Champlain Refining Company connecting with Oklahoma City pool thence north to the Enid and Tonkawa areas.

PAW Approves Pipe Line For Pool in Kent County

Gulf Refining Company has obtained permission from PAW to lay 15 miles of 4-inch gathering line north from the Pittsburg pool in Kent County, Texas, to connect with the Gulf main line. This is the first outlet for the pool which has 15 producing wells. Construction has started and completion is scheduled in 30 days.

Panola Gas Line

Feazel & Kinsey, Shreveport, will begin immediately laying 7 miles of 6-inch pipe line connecting their Ross 1, Moorman survey, and other Panola County, Texas, wells to the Goodrich-Wascom main line of United Gas Pipe Line Company.

Kerlyn Acquires Block of Acreage in Lease Sale

Kerlyn Oil Company was the successful bidder for oil and gas prospecting permits in Fremont County, Wyoming, when bids were opened May 11 at Fort Washakie, acquiring a total of 418,560 acres for $110,362. The land covered by the permits was divided into three units which carry preferential rights to leases on a limited area of the lands covered by each permit and the company offered $52,480 for Unit 1, comprising 144,000 acres, $44,800 for Unit 2, comprising 142,720 acres and $13,082 for Unit 3, comprising 131,840 acres. Other bidders were Sinclair Wyoming Oil Company, offering $15,007.07 for Unit 2, Stanolind Oil & Gas Company offering $15,000 for Unit 2 and $5,000 for Unit 3 and Carter Oil Company offering $13,000 each for Units 1 and 2. Land covered by the permits is located in portions of Tp. 2N-Rg. 2W, Tp. 3N-3W, Tp. 4N-1E, 4N-4E, 4N-1&2W, 4N-4W, 5N-1, 2, 3 & 4W, 6N-1 2 & 4 E, and 6N-1 & 2 W.

Carthage Gasoline Plant Nearly Ready to Operate

The Carthage, Texas, gasoline extraction plant of Arkansas-Louisiana Gas Company and the field gathering lines are nearing completion and the plant will begin operation about June 1, company officials have announced.

The plant will process about 25 million feet of gas daily from the Panola County fields, extracting the gasoline and petroleum by-products before the gas is turned into company mains for distribution for fuel.

Kentucky Oil and Gas Group To Hold Meet June 23-24

The annual meeting of members and directors of the Kentucky Oil & Gas Association will be held the night of June 23 at Hotel Lafayette, Lexington, Kentucky when officers for the year 1944-45 will be elected.

On the following day, a technical meeting on water flooding and pressure maintenance will be held. A noon luncheon and banquet at night will hear addresses from important men in the industry.

Tulsa Engineers Elect

W. A. Melton, manager of Tulsa School Board, has been named president of Tulsa Engineers Club. Other officers include H. M. Cooley, Bethlehem Steel Company, S. W. Cobb, Barnsdall Oil Company, E. M. Newland, Oklahoma Steel Casting Company, A. P. Francis, Crane Company, and R. S. Knappen, Gulf Oil Corporation, vice presidents. W. R. Wooten is treasurer. Fred M. Carroll, Shell Oil Company, F. B. Taylor, Brooks-Wilson Company and C. S. Larkey, Sinclair Prairie Oil Company, are directors.

API Tulsa Banquet

Don Emery, executive vice president of Phillips Petroleum Company, will be the principal speaker (on "Postwar Delusions") at the banquet at the Tulsa Club at 7 p. m., May 26, which will conclude the meeting of the American Petroleum Institute Division of Production at Tulsa, May 25-26. Attendance at the banquet has been limited to 300 and reservations are being handled by D. Sikes of Baroid Sales Division.

Shawnee Society Elects

Officers of the Shawnee Geological Society have been elected as follows: Roy D. McAninch, Stanolind Oil & Gas Company, president; E. R. Owen, Phillips Petroleum Corporation, vice president, and Miss Marcelle Mousley, Atlantic Refining Company, secretary-treasurer.

Tulsa Geologists Elect

The Tulsa Geological Society at its annual meeting May 15, elected J. V. Howell of Adkins Oil Company, president, W. C. Butts, Atlantic Refining Company and W. Reese Dillard, Peters Petroleum Company, vice presidents, L. C. Case, Gulf Oil Corporation, secretary-treasurer.

. . . for Production

KAY TYPE STEEL DERRICKS . . . SUB-STRUCTURES . . . ENGINE FOUNDATIONS . . . STAIRWAYS . . . LOADING RAMPS . . . PIPE RACKS . . . TOOL HOUSE SUPPORTS . . . JACKKNIFE CANTILEVER DRILLING MASTS . . . TRUCK MOUNTED MASTS . . . SERVICING MASTS . . . REDHEAD PUMPING UNITS . . . PUMPING UNIT ACCESSORIES . . . PUMPING UNIT ENGINES and MOTORS . . . NON-SKID GRATING . . . STANDARD CABLE TOOL RIGS and ACCESSORIES.

Redhead Pumping Units available in 5, 9, 14, 21 and 28 H. P. Double Reduction — Twin Crank Units with beam and/or crank counter weights. A "fool-proof" chain tightening device, incorporated in the larger units, enables quick adjustment in the field.

LEE C. MOORE & COMPANY

INCORPORATED

PITTSBURGH ● TULSA

EXPORT OFFICE ● 30 ROCKEFELLER PLAZA, NEW YORK

Gasoline and Distillate Fuel Production Higher

United States crude runs to stills were materially increased in the week ended May 13, to within 53,000 barrels of the all-time record daily average of early this year, with the result that refinery output of gasoline and distillate fuel oil rose sharply, although production of residual was sharply lower than in the previous week. Stocks of gasoline therefore were drawn upon less than normally for the season, and there was a seasonal building up of light fuel stocks; but production of residual was not large enough to avoid drawing on the too-low stocks of that product. Crude oil production was down but exceeded runs to stills about 100,000 barrels daily. Crude oil stocks further declined in the week of May 6, latest Bureau of Mines weekly report showed.

Gasoline production, including natural blended at refineries, averaged 1,945,000 barrels per day in the week of May 13, an increase of 72,000 daily over the previous week and 431,000 daily or 28.5 percent over the output in the like week last year. Stocks of finished and unfinished gasoline were reduced at the rate of 64,000 barrels per day, and at the end of the week were nearly 1,000,000 barrels or 1 percent above a year previously in totaling 87,823,000 barrels.

Production of gasoil and distillate fuel averaged 649,000 barrels per day, an increase of 61,000 over the week before and 118,000 daily or 22 percent above output in the like week last year. Stocks of the light fuels accumulated during the week at the rate of 46,000 barrels daily, and at the end of the week were at practically the same level as a year previously, having totaled 30,763,000 barrels.

Residual fuel oil production averaged 1,199,000 barrels per day, down 78,000 from the week before although 100,000 daily or 9 percent above production in the corresponding week a year ago. Stocks of residual were reduced at the rate of 15,000 barrels a day, and on May 13 totaled 49,737,000 barrels, an amount 17,629,000 barrels or 26 percent less than the 67,366,000 barrels on hand a year previously.

In averaging 4,400,000 barrels daily in the week ended May 13, crude runs to stills averaged 4,400,000 barrels daily, up 84,000 from the previous week and 642,000 daily or 17 percent above throughput in the like week last year.

United States crude production averaged 4,502,000 barrels a day, down 17,000 from the previous week but 518,000 daily or 13 percent above output in the corresponding week a year ago.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod.		Runs to Stills		Crude Stocks		Gasoline Stocks		Gasoil and Distillate Stocks		Residual Fuel Oil Stocks	
	Barrels Daily	Week Ended	Barrels Daily	Week Ended	Barrels	Week Ended	Barrels	Week Ended	Barrels	Week Ended	Barrels	Week Ended
Highs:												
1941	4,337	11-22	4,120	10-18	266,187	3-29	99,727	3-29	[1]54,983	11-15	102,448	1- 4
1942	4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	49,861	11-14	95,857	1- 3
1943	4,436	11-13	4,331	12- 4	245,752	5-29	94,159	3-20	46,187	11-27	72,881	1- 2
1944	[1]4,519	5- 6	[1]4,453	1- 1	240,992	1- 1	89,162	4- 1	42,310	1- 1	57,330	1- 1
Lows:												
1939	[2]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4- 8
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,381	4-12	90,914	7-12
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12- 5	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-13	232,191	1- 9	68,182	10-16	30,732	4- 3	57,596	12-25
1944	4,357	1- 1	4,228	2-12	233,632	4-29	76,302	1- 1	30,232	4-29	49,737	5-13

TRENDS OF 1943 AND 1944

Trends in Week Ended:	Crude Oil			Gasoline		Gasoil and Distillate		Residual Fuel	
	Production Daily	Runs to Stills Daily	Stocks Week End	Production Weekly	Stocks Week End	Production Weekly	Stocks Week End	Production Weekly	Stocks Week End
1943:									
January 2	3,871	3,734	233,938	10,957	82,420	4,285	42,913	7,683	72,881
January 30	3,826	3,698	233,863	10,339	88,830	3,888	37,057	7,452	70,763
February 27	3,873	3,709	235,217	10,566	93,157	4,230	32,939	7,839	70,140
March 27	3,896	3,742	239,126	10,231	94,079	3,541	30,980	8,018	67,938
April 24	3,913	3,737	242,035	10,583	91,001	3,954	31,142	8,168	67,455
May 29	3,970	3,679	245,752	10,656	83,937	3,798	32,274	7,672	67,682
June 26	3,955	4,015	242,657	11,092	79,589	3,876	34,044	8,126	67,960
July 31	4,133	3,788	238,420	11,127	74,977	3,765	36,363	8,478	66,877
August 28	4,196	4,227	236,170	12,420	72,525	4,351	37,928	8,732	67,250
September 25	3,344	4,156	233,013	12,206	70,024	4,608	40,328	8,560	66,659
October 30	4,383	4,176	237,219	12,813	69,297	4,642	44,591	7,968	63,833
November 27	4,414	4,261	239,761	12,638	69,980	4,379	46,187	8,633	62,143
December 25	4,363	4,185	241,310	12,597	74,024	4,457	43,791	8,689	57,596
1944:									
January 1	4,357	[1]4,453	240,992	13,192	76,302	4,575	42,310	9,141	57,330
January 29	4,409	4,359	240,251	13,427	81,085	4,054	37,266	8,889	52,857
February 26	4,423	4,377	237,137	13,183	85,248	4,558	33,766	8,952	51,387
March 25	4,385	4,443	236,285	13,362	87,287	4,979	31,319	9,013	51,669
April 1	4,383	4,435	234,667	13,824	89,162	4,450	30,530	8,367	51,326
April 29	4,431	4,300	235,342	13,126	88,462	4,284	30,236	8,398	49,985
May 6	[1]4,519	4,316	234,166	13,115	88,267	4,118	30,438	8,946	49,841
May 13, 1944	4,502	4,400	.....	13,618	87,823	4,545	30,763	8,399	49,737
May 15, 1943	3,984	3,758	[4]240,775	10,600	87,011	3,720	30,811	7,701	67,366
Change:									
In week	—17	+84	—1,176	+503	—444	+427	+325	—547	—104
In year	+518	+642	—6,609	+3,018	+812	+825	—48	+698	—17,629
In year	+13.0%	+17.1%	—2.7%	+28.5%	+0.9%	+22.2%	—0.2%	+9.1%	—26.2%

[1] All time peak. [2] Lowest since April, 1922. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent States. [4] Stocks, May 8, 1943.

Natural Gasoline for March Shows Slight Gain

Daily average production of natural gasoline and allied products dropped in March to 10,906,000 gallons from 10,956,000 gallons in February, it was reported by the Bureau of Mines May 15.

The decline in daily average was confined to light products other than natural gasoline, which showed an increase to 179,004,000 gallons for the month against 166,068,000 gallons in February.

Other production was announced by the bureau as follows: Cycle products, 61,194,000 gallons against 57,078,000 gallons in February; iso-butane at natural gasoline and cycle plants, 21,000,000 gallons against 18,438,000 gallons; other liquefied petroleum gases at natural gasoline and cycle plants, 76,902,000 gallons against 76,146,000 gallons; liquefied refinery gas at refineries, 12,306,000 gallons against 15,540,000 gallons; benzol, 8,400,000 gallons, unchanged.

Total stocks increased from 178,290,000 gallons on February 29 to 184,338,000 gallons at the close of March.

Tests for Oil and Gas in State of Montana Listed

The Geological Survey, United States Department of the Interior, announces publication in mimeographed form of a list of tests for oil and gas in Montana. This list, compiled by geologists C. E. Erdmann and N. A. Davis of the Survey staff, contains basic information concerning the location, depth, date of drilling, results and geologic significance of more than 200 wells, mostly "wildcats," in the Plains region of that State. The information is presented in three tables: I. A list of significant tests that includes the deepest well in each recognized field, trap, or area that has been proved or presumed to contain oil or gas in commercial amounts; II, a list, partly duplicate, of wells drilled through the Madison limestone into older rocks; and III, a supplementary list of dry holes in various parts of Montana that are not regarded as particularly significant because they tested no structural or stratigraphic feature that is recognized as favorable to oil or gas entrapment.

A limited number of copies of this publication are available for free distribution in the offices of the Geological Survey, Washington, D. C.; Room 305, Federal Building, Casper, Wyo.; Room 335, Federal Building, Billings, Mont.; Room 225, Federal Building, Great Falls, Mont.; and Room 414 Denham Building, Denver, Colorado.

Mississippi Field Finds Second Massive-Sand; Heidelberg Limited

Exceptionally active development proceeds in Mississippi, as wildcatting and leasing increase, while drilling furnishes additional information on the importance of new fields. Locations have been made for two new wildcats, one in Leake County, where Kingwood Oil Company and Stanolind Oil & Gas Company have 3500 acres under lease, and the other in Lawrence County. Cranfield field, Adams County, now has a second Massive-sand well and a third in immediate prospect. Heidelberg, Jasper County, has gained another oil well, but dry holes within a radius of 1½ miles to the southeast and northwest of the discovery well limit prospective production within less area than expected, although location has been made 2½ miles west and 1 mile south of the discovery for a test offering possibility of opening another productive area comparable with that already established between the discovery well and Heidelberg townsite.

The new Leake County test will be Kingwood Oil Company's Denkman 1, SW SE 5-10n-8e. In Lawrence Conuty, Sinclair-Wyoming Oil Company's Jefferson D. Riley 1 will be drilled in C SE 14-9n-20w in the New Hebron area. The test will go to 9000 feet.

The California Company's National Gasoline 5, 66-7n-1w, in the Cranfield area, Adams County, is the second Massive-sand well for that area, making 16 barrels an hour on 5/32-inch choke, with 1850 pounds tubing pressure. Perforation was from 10,370 to 10,400 feet with 180 shots. The well checked higher than National Gasoline 2. The same company's National Gasoline 4, 53-7n-1w, is coring at 10,390 feet and seems sure to make the third Massive producer in the area.

Rogers Lacy's Travis 1, C NW NE 32-1n-13e, in the center of Heidelberg townsite, has shed further light on the areal extent of the Heidelberg field. With casing perforated with 216 shots between 4965-5033 feet, the well appeared from swabbing test to be good for 150 barrels daily on pump and indicated it was close to the edge of production in that vicinity. Located 1 mile east and ¼ mile south of the discovery well, it was only 40 to 65 feet above water as revealed in two failures toward the south. Those failures were F. R. Sylvestre's Eddy 1, SE SW 33-1n-13e, 1 mile south and 1¾ miles east of the discovery well, 200 feet lower structurally than the Lacy well, and abandoned at 5370 feet; and Kingwood Oil Company's Campbell 1, SW NW 3-1n-13e, 1½ miles south and ½ mile east of the discovery well, also about 200 feet lower on structure than the Lacy well and abandoned at 5220 feet. Productive area in the vicinity of the Heidelberg discovery well thus will be confined apparently to a distance of 1 to 1½ miles to the east and south of the discovery well. A similar amount of productive area may be proved to the northeast and east, and some further light on that northern area will be furnished soon by Gulf Refining Company's well in SE NE 30-1n-13e, north offset to that company's prolific Lewis Morrison 1 in NE SE 30-1n-13e, second well of the field and producer from 15 sands of combined thickness of 200 feet in a 500-foot section. This northern test, ½ mile north and ¼ mile east of the discovery well, is coring sand.

All the above wells are in the area just east of a graben, the discovery well having cut the northwest-southeast running fault of the east side of the graben. In addition, Sun Oil Company's Lindsey 1, NW NE 31-1n-13e, south offset to the discovery, had a serious gas blowout and has been killed and the company will drill another hole in lieu of it.

While the indicated productive area to the east and south of the Heidelberg discovery has fallen short of expectations, because of sharper dip of the strata than anticipated, there has been further disappointment through failure of Gulf Refining Company's Gus Husband 1 to yield production on the graben 1 mile west and 1 mile north of the discovery well. A dry hole, it was 400 feet low in relation to Lewis Morrison 1, the prolific well with the full section. It failed to support hopes for a domed oil sand section across the graben, thick at the middle of the graben, and indicated instead a flat, thin sand. Across the graben to the west is a distance of over 2 miles, and just beyond it there is a possibility of finding another productive area which might be roughly a counterpart of the present producing area east of the graben. To explore this possibility, Gulf Refining Company has made location for John Morgan 1, SW SW 35-1n-13e, 2½ miles west and 1 mile south of the discovery well, a test which therefore will be of extraordinary importance.

Adams County: The California Company's National Gasoline 6, 53-7-1, was drilling at 9373 feet; National Gasoline 7 was a new location in 66-7-1. Humble Oil & Refining Company's Stowers 1, 9-8-2, was coring at 7050 feet. Pure Oil Company's McDowell 2, 12-6-3, was shut down on account of high water.

Copiah County: Sun Oil Company's Ferguson 1, 6-9-6, was working on stuck drill stem at 1322 feet, with total depth 5305 feet.

Franklin County: Amerada Petroleum Corporation's Homochitto 1, 17-7-5, was drilling below 10,200 feet, after passing the Tuscaloosa at 9690-9700 feet, Placid Oil Company's Crosby 1, 33-7-1, was drilling around 4050 feet.

Jackson County: Four new locations in Heidelberg field are Gulf Refining

Wells Completed in the United States in Week Ended May 20, 1944

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama	1	....	....	1	2	....	....	....	1	1	3	1	10	.....
Arizona	....	....	....	....	....	....	....	....	....	....	....	....	3	....
Arkansas	3	....	....	....	3	....	....	....	2	2	5	2	74	96
California	27	3	....	....	30	1	....	....	6	6	37	42	771	495
Colorado	....	....	....	....	....	....	....	....	....	....	....	....	9	8
Georgia	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Illinois	16	....	....	8	24	....	....	....	9	9	33	54	590	680
Indiana	1	....	....	2	3	....	....	....	....	....	3	8	106	100
Iowa	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Kansas	14	1	....	7	22	....	1	....	9	10	32	25	669	613
Kentucky	3	....	....	....	3	....	....	....	1	1	4	16	243	108
Louisiana	10	....	....	....	10	....	....	....	3	3	13	30	273	214
North Louisiana	4	....	....	....	4	....	....	....	1	1	5	7	91	89
South Louisiana	6	....	....	....	6	....	....	....	2	2	8	23	182	125
Michigan	8	1	....	3	12	....	....	....	8	8	20	18	223	180
Mississippi	2	....	....	1	3	....	....	....	3	3	6	3	45	30
Missouri	....	....	....	....	....	....	....	....	....	....	....	....	6	6
Montana	5	....	....	1	6	....	....	....	....	....	6	12	110	68
Nebraska	....	....	....	....	....	....	....	....	....	....	....	....	7	19
New Mexico	4	....	....	....	4	....	....	....	2	2	6	14	162	100
New York	15	....	10	....	25	....	....	....	....	....	25	25	475	437
Ohio	1	....	....	3	4	....	....	....	....	....	4	13	293	327
Oklahoma	21	4	....	7	32	....	....	....	3	3	35	36	605	524
Pennsylvania	25	4	15	2	46	....	....	....	....	....	46	43	1,037	930
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	5	2
Texas	71	1	3	15	90	6	5	1	27	33	129	110	2,149	1,476
E.Tex.Bor. Co.'s	....	....	....	....	....	....	....	....	1	1	1	1	6	8
E. Texas Field	....	....	....	....	....	....	....	....	....	....	....	....	3	2
Rest of E. Texas	2	....	....	1	3	....	....	....	6	6	9	2	112	85
North Texas	12	....	3	9	24	2	....	....	8	8	34	25	494	338
W. Central Tex.	6	....	....	1	7	....	....	....	3	3	10	6	147	126
West Texas	26	....	....	1	27	4	1	....	3	4	35	27	596	345
Tex. Panhandle	5	1	....	....	6	....	....	....	....	....	6	4	80	85
G. Coast, Upper	4	....	....	1	5	....	3	1	2	6	11	14	200	105
G. Coast, Lower	10	....	....	....	10	....	....	....	1	1	11	20	325	220
Southwest Texas	5	....	....	2	7	....	1	....	3	4	11	9	153	135
S. Central Tex.	1	....	....	....	1	....	....	....	....	....	1	2	33	27
West Virginia	3	10	....	6	19	....	....	....	....	....	19	13	356	229
Wyoming	2	....	....	....	2	....	1	....	....	1	3	3	61	44
Total U.S.	232	24	28	56	340	7	7	1	74	82	429	468	8,283	6,689

* Includes distillate wells. † Includes salt water disposal wells.

This Is The Place!

The Mercantile National Bank has the facilities and the desire to give you the service to which you are entitled at this important financial center of the Great Southwest.

Geared to the needs of the times, we welcome the opportunity of serving men in the oil industry.

When you have Dallas business . . . *this is the place.*

MERCANTILE
NATIONAL BANK AT DALLAS

Resources Over $100,000,000.00

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

Company's Morgan 1, C SW SW 35-1-12; Rogers Lacy's Clayton 1, NE NE 32-1-13; J. B. White and Gulf's Heidelberg-Burns 1, C NE SE 20-1-13; Sun Oil Company's Jones, C NW NW 32-1-13.

Jones County: Gulf Refining Company's Jones County 1-C, 16-9-10, was drilling around 7620 feet after topping Davis sand at 7270 feet.

Madison County: Roeser & Pendleton's Charlie Trolio wildcat, C NE SW 20-10-4, was drilling below 6300 feet.

Rankin County: Phillips Petroleum Company's Denkman 1, 13-7-4, was drilling below 11,500 feet.

Wayne County: Humble Oil & Refining Company's G. M. & O. R. R. 2, 1-9-9, Eucutta field, was running electric log at 6538 feet.

Alabama

Two Additional Locations Announced During Week

Location of a new Escambia County wildcat, Humble Oil & Refining Company's Skinner 1, C SE NW 10-3n-10e, and preparation by Hunt Oil Company to begin operations on Trice 2, Choctaw County field outpost, gave exploratory work in Alabama added impetus during the week.

Edgar Johnston's Peteet 1, C SE SE 3-16n-2e, Marengo County, was being watched as it drilled lime below 4250 feet. The well will be carried to the Smackover-Cotton Valley formations, if present.

Stanolind Oil & Gas Company is reported ready to begin work on Woods 1-A, NE SE 23-14s-15w, Lamar County.

Hunt Oil Company's Trice 1, C SW SW 35-11-4, Choctaw field, has been completed as a pumper, making 19.4-gravity oil from around 2770 feet. Hole was drilled to the Eutaw at 3749 feet and plugged back. The company's Jackson 1, SW NW 1-10-4, same field, was abandoned at 3919 feet.

Florida

Humble and Pure Plan Dade, Gulf County Tests

Two new tests in Florida are expected to get under way soon. Humble Oil & Refining Company, is moving in rig on State 1, C NE NW 30-55s-36e, Dade County, and Pure Oil Company is moving in material for Gulf-Bay 1, 23-5s-9w, Gulf County, although exact location has not been announced.

Humble Oil & Refining Company's Gulf Coast Realty 2, C SW SE 30-48s-30e, Collier County, is coring below 11,517 feet. W. C. Blanchard's Everglades 1, SW SW 31-53s-35e, Dade County, is drilling below 9000 feet. Hunt Oil Company's Gibson 2, Madison County, is drilling below 4400 feet.

By official ruling last week Humble Oil & Refining Company is entitled to the state reward of $50,000, and free oil leases on 40,000 acres of land for bringing in Florida's first commercial well. Located at Sunniland, the well has produced 10,000 barrels of oil since discovery last October. The company has announced it will donate the reward to two Florida state schools and will add $10,000 when it gets the free lease.

Illinois Basin

Parkersburg Pool Extended 1½ Miles by Texaco Well

Gulf Refining Company's Donoho 1, NW NE NW 23-1s-4e, Jefferson County, gave the West Coil pool a new pay, making 210 barrels of oil and 5 barrels of water in 24 hours from Aux Vases sand at 2727-38 feet and McClosky lime at 2788-94 feet after both pay sections were perforated. Production was natural. The pool originally produced from the McClosky lime only. Total depth of the hole was 2814 feet.

The Parkersburg pool, Edwards County, was extended, or possibly a new pool was discovered, at The Texas Company's Lambright 1, SW SE SE 1-1n-10e. On a 1-hour drill-stem test it made 1807 feet of oil and 130 feet of oil-cut mud. Pipe was set at 3240 feet. The well is one and a half miles from Parkersburg production.

Operations rose to a new high for the year last week with a total of 246 recorded. Fifty wildcat operations were underway, an increase of 8 from the previous week. First reports jumped from 31 to 38 and they included 10 wildcats. Twenty-five oil wells were completed for total initial production of 1962 barrels. Nine holes were dry.

Jefferson County: The Texas Company's McKinney Community 1, E½ SW SW 14-1s-3e, swabbed 177 barrels of oil in 20 hours from McClosky lime at 2755 feet. The well is on the west side of the Divide field and is considered an extension.

Jasper County: Kingwood Oil Company's Flinn 1, NW NW NW 9-6n-8e, a wildcat near Latona, has been abandoned at 3114 feet through the McClosky lime.

White County: Gulf Refining Company has set casing to test Lamarr 1, SE NE NW 19-4s-11e, east of Crossville. Pipe will be perforated in McClosky lime and Pennsylvania sand.

Effingham County: B. M. Heath has started operations at Walker 1, NW NW SE 22-6s-6e, a wildcat test, east of the Mason field.

Kentucky

The Uniontown pool of Union County, Kentucky, has been extended ½ mile southwest at E. T. Wix' Alhorn 1, 22-P-19. Waltersburg sand was encountered at 1760-1800 feet and total depth of the hole is 2296 feet. A drill-stem test showed 310 feet of oil and 240 feet of oil-cut mud.

Revising Oklahoma Producing Area List

Lists of Oklahoma oil and gas fields are being revised as of May 1 this year by the Nomenclature Committee of the Kansas-Oklahoma Division of Mid-Continent Oil & Gas Association. Producing areas will be defined to the closest 40 acres; names of producing horizons in all fields will be ascertained and set forth with field description and data will be co-ordinated into complete state list arrangement in sequence by township and range and alphabetically by fields.

Oklahoma

McClain County Discovery Completed After Long Test

Carter Oil Company shipped the first oil from its new deep Wilcox Anadarko Basin discovery, Cottingham 1, SCE SW 4-7n-3w, McClain County, to Canada. Pending confirmation the new pool has been tentatively named Washington and production will be trucked to Purcell. Meanwhile the discovery well appeared a completion after more than two months of testing and has been pinched in to 200 barrels daily with no water showing. It is producing from 10,625-10,645 feet and ranks as the deepest producer in Oklahoma.

Grady County: Another deep test for the Anadarko Basin area west of the Nemaha Ridge appears to be shaping up as L. S. Youngblood, was reported assembling a 7000-acre block for a large company. The block centers in and around Township 3n-5w and extends south into Stephens County into Township 2n-5w. When drilled the test is said to be projected to 15,000 feet to test Ordovician.

West Edmond: While reservoir pressure tests on 34 wells were being made by the Oklahoma Corporation Commission the results of which are to be presented probably May 31, a crop of new wells appeared in the offing as 10 tests were nearing the pay zone. On the west side of the pool, Amerada Petroleum Corporation's Meeker 1, C SW SW 31-

1700 BLOCK MAURY STREET
P. O. BOX 1331
Phones: Capitol 0396—L. D. 448

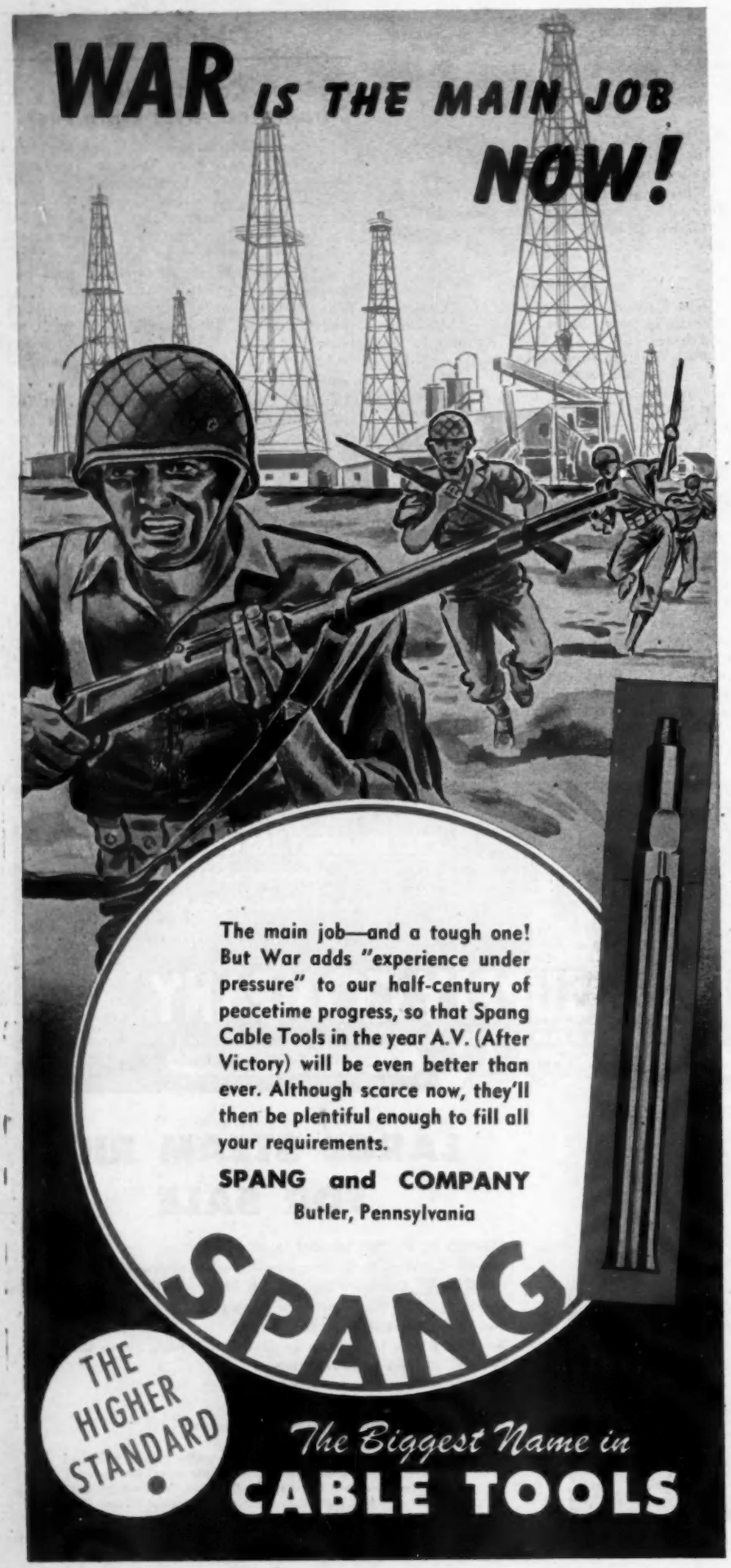
PIPE, MACHINERY AND OIL WELL SUPPLIES
HOUSTON, TEXAS
Branch at Corpus Christi, Texas

TEXAS PIPE AND SUPPLY COMPANY
INCORPORATED

LARGE STEAM RIG FOR SALE

3—125 H. P. 350 Lb. Oil Well Boilers
1—9" Oil Well R. B. Drawworks with hydromatic brake
6100' 4½" External Upset Drill Pipe
1—27½" Oil Well Oil Bath Rotary
1—12 x 12 Ideal R. B. Engine
2—10 x 4½ x 10 Wilson Snyder Boiler Feed Pump Units
1—20" Wilson Snyder Pump
1—18" Wilson Snyder Pump
1—8" Swivel
1—10¾" Cameron Blowout Preventer

The rig listed above is in first-class shape and is equipped completely with all Cameron high-pressure valves and is ready to drill without any additional equipment. We will be glad to show you this rig at its location in Central Texas. This rig is subject to prior sales.


WAR IS THE MAIN JOB NOW!
The main job—and a tough one! But War adds "experience under pressure" to our half-century of peacetime progress, so that Spang Cable Tools in the year A.V. (After Victory) will be even better than ever. Although scarce now, they'll then be plentiful enough to fill all your requirements.
SPANG and COMPANY
Butler, Pennsylvania
SPANG
THE HIGHER STANDARD
The Biggest Name in
CABLE TOOLS

14n-4w pumped 120 barrels of oil and 242 barrels of salt water the first 24 hours. Hole was plugged back to 6969 feet from 6973 feet and perforated at 6964-69 feet.

West Moore: East of the Navy emergency airfield which some believe will have to remove its hangars to make way for oil derricks, Mid-Continent Petroleum Corporation's Westermier, NE SW SW 26-10n-3w, Cleveland County, 3 miles east of the pool, is drilling below 7800 feet. Tops have not been released. Southwest of nearest production Sunray Oil Company's Harden 1, NE SE NE 31-10n-3w, is drilling below 8000 feet.

Garvin County: Ohio Oil Company is active at McKinney 2, NE SW SE 18-3n-2e, southwest diagonal offset to McKinney 1, discovery well which proved the Pauls Valley area good for oil as well as gas. The discovery flowed 263 barrels of oil through tubing in 18 hours from 2886-92 feet.

Washita County: Gulf Oil Corporation's Hare 1, SE NE SW 8-8n-20w, which opened West Sentinel pool, swabbed 160 barrels of oil and 24 barrels of water in 24 hours from the second Granite Wash zone at 6608 feet. The company's Shields 1, SE NW SE 11-8n-20w, was drilling below 5050 feet after reporting oil stains in the upper Granite Wash zone.

Carter County: Five locations for the new Bayou pool extension followed closely on the heels of The Texas Company's Pennsylvanian discovery, Chubbee 1, NW NW SW 5-5s-1w, which flowed 174 barrels in 1 hour through casing on initial test and then 355 barrels in 4 hours through tubing. Stakes were driven by The Texas Company for Chubbee 2, SE NW SW 8-5s-1w; Watson 1, NE SE NW 9-5s-1w, and Dolman 1, SE NE SE 6-5s-1w. Samedan Oil Company staked Dolman B-1, NW NE SE 6-5s-1w, and Will H. Smith staked Fee 1, NW NW NE 8-5s-1w.

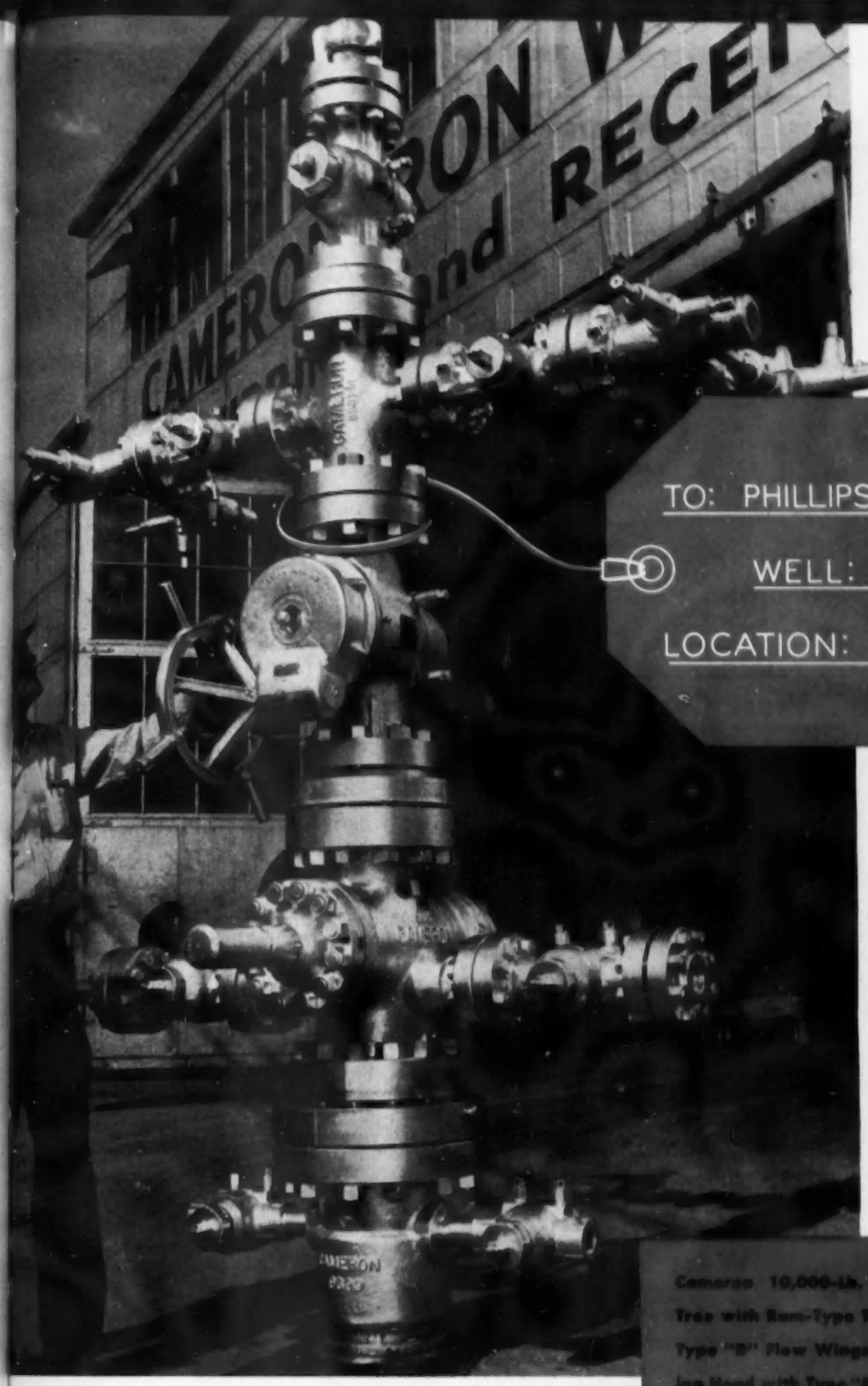
Kansas

Stafford County Holds Oil Spotlight for State

Falcon-Seaboard and British-American Oil Company's Koelsch 1, NW SW SW 11-24s-14w, Stafford County, wildcat a mile west of the old one-well Rattlesnake pool, flowed 50 barrels of oil an hour with no water from Kansas City lime after perforating with 33 shots and acidizing with 1000 gallons at 3759-66 feet. The well reported slight oil show in Viola topped at around 4000 feet and was plugged back to 3799 feet.

Magnolia Petroleum Company's Ransom 1, C SE NE t-24s-11w, a mile west of the Zenith West pool, flowed 45 brrels of oil in a 6-hour test through 1-inch choke from Viola topped at 3782 feet. Pipe was set at 3783 feet.

Stanolind Oil & Gas Company's Delker 1, SEc NE 33-23s-13w, 3½ miles north of the St. John pool in Stafford County, recovered 240 feet of oil and 120 feet of muddy oil on drill-stem test from 3917-24 feet for a possible Arbuckle producer. Casing was landed at 3920 feet for test of Simpson topped at 3891 feet. Core cut at 3894-99 feet had slight oil show and drill-stem test at 3888-99 feet



CAMERON 10,000 lb. TEST SAFETY XMAS TREE Tagged for

TO: PHILLIPS PETROLEUM COMPANY

WELL: ADA PRICE NO. 1

LOCATION: PECOS COUNTY, TEXAS

the world's deepest oil well, Phillips Petroleum Company's Price No. 1, Pecos County, Texas.

Cameron 10,000-Lb. Test Safety Xmas Tree with Ram-Type Tubing Control Head, Type "B" Flow Wings, and Slip Type Casing Head with Type "M" Test-Weld Flange.

Phillips Petroleum Company's Price No. 1, the world's deepest hole (15,255 feet), might also prove to be the deepest producing well ever drilled. If so, then Price No. 1 will join the long list of conspicuously deep, high pressure wells that have been brought into production through Cameron Safety Xmas Trees with the Cameron Closed Pressure Method of Well Completion.

A Cameron Ram-Type Tubing Control Head incorporated as the foundation for Cameron Safety Xmas Trees provides the highest degree of positive control at every stage of the completion work: while drilling in, setting bottom hole equipment, and washing the well. The well may be re-entered under pressure to adjust tubing elevation, run packer, etc. In event the well requires re-working, the Ram-Type Tubing Control Head provides positive blowout protection while this work is underway. The Cameron Back-Pressure Valve and patented Back-Pressure Valve Removing Tool utilized in the Cameron Closed Pressure Method of Well Completion have been proved on hundreds of high pressure wells including the South Louisiana well which developed the record tubing flow pressure of 6400 lbs.

Complete details on Cameron Safety Xmas Trees and the Cameron Closed Pressure Method of Well Completion will gladly be sent to interested operators on request.

CAMERON IRON WORKS · OILWELL SPECIALTIES · ASSOCIATION OF WELL HEAD MANUFACTURERS · CERTIFIED

CAMERON IRON WORKS, INC.

711 MILBY ST., HOUSTON, TEXAS

Export: 74 Trinity Place, New York, N. Y. *California:* The Howard Supply Co., Los Angeles. *Rocky Mountain:* Mountain Sales & Service, Casper, Wyo.

recovered 60 feet of oil- and gas-cut mud.

Rooks County: Stanolind Oil & Gas Company's Peterson 1, NE NW NW 23-8s-19w, 3 miles north of the Barry pool, was waiting on cement at 3352 feet and ready to test an interval in the Simpson at 3353-59 feet which recovered 35 feet of oil-cut mud on a two-hour drill-stem test, last measurement being total depth.

Sumner County: West of the Zyba pool, Co-operative Producers Association's William 1, C NE NE 14-30s-1w, was testing the Wilcox sand topped at 3856 feet. After shooting, 700 feet of oil rose in the hole and the well bailed about 15 barrels of oil in 24 hours. Total depth is 3873 feet.

Russell County: Gaugh-Davis' Claussen 1-B, SW SW SW 27-12s-14w, tested more than 215 barrels of oil daily from Lansing-Kansas City lime topped at 3133 feet. Total depth is 3155 feet and the strike is about 3 miles north of the North Russell pool in Central Kansas.

Barton County: Royer et al's Murdy 1, NE NE 8-18s-14w, reported an oil show in the Arbuckle at 3497-3506 feet and will test. The wildcat is 2 miles southwest of the Boyd pool.

Missouri

Third Wildcat Test for Holt County Sets Pipe

A third wildcat test for Holt County east of Oregon is drilling after setting surface pipe.

Miller & Harper's Moss 1, C NW NW NW 4-59n-37w, Holt County, is drilling below surface pipe. It is a southeast offset to Skelly Oil Company's Mutual Benefit 1, which reported showing in Hunton. Miller & Harper recently abandoned Egger 1, ½ mile east of the Skelly well, when formations ran low although a two-foot Hunton core showed saturation. Missouri production so far has come from Bartlesville sand.

Caldwell County: Todd et al's Mabe 1, SW SE SE 28-55n-29w, has set pipe at 1276 feet for a Hunton lime test topped at 1142 feet. The wildcat is west of the Polo gas pool.

Platte County: Missouri Valley Gas & Oil Company is testing Brown 8, NE NW SW 12-51n-34w, where it picked up some gas in the Prue sand at 579 feet. Initial drill-stem test recovered 300,000 feet of gas daily.

Michigan

Show of Oil Reported In Montmorency County

George Stevens' Crank 1, SW NE NW 15-30n-3e, Montmorency County, a wildcat 140 miles northeast of Mt. Pleasant, reported a show of oil from Monroe at 2165 feet, with 1800 feet of water from an unknown upper horizon. The well has been drilling with an improvised rig since 1941. Reticence on the part of the owner as to the showing created a mystery which resulted in activity by lease brokers far out of proportion to its apparent value.

New Mexico

Prolific Oil Strike in Western Lea County

Western Lea County recorded a prolific oil strike when The Texas Company's Baskin 1, C SE SE 22-19s-33e, 5 miles northeast of the Salt Lake 8-well pool, blew out while idle after apparently missing its pay objective in drilling to 3568 feet. The well flowed 40 barrels of oil hourly while bleeding down to reduce the pressure following efforts to control the flow with water. Considerable gas accompanied the oil. Seven-inch pipe has since been cemented at 3555 feet. This wildcat logged salt at 1510-2990 feet and top of solid lime at 3420 feet with elevation of 3632 feet. Production is from the top of the Seven Rivers lime section, and the area involves a reef type of structure that is conceded to be small by nearby failures. Baskin 1 is estimated 27 feet low to a 4150-foot failure 1½ miles southeast.

West Central Texas

Fourth Mississippi Line Found in North Stephens

Texas Pacific Coal & Oil Company scored its fourth Mississippi lime discovery amidst abandoned and semi-depleted Bend lime producing areas in Northern Stephens County in completing J. E. Douglas 1-A, Thomas Watson Survey, flowing 503 barrels of 43-gravity oil with gas-oil ratio of 3817/1, on ½-inch choke, after using 1000 gallons of acid at 4343-62 feet. Five-inch pipe was cemented on top of Mississippi at 4343 feet, with elevation of 1156 feet. This strike is 5000 feet west by south of the company's Brownville, where the company has 2 oil wells in the Mississippi and a gasser in Marble Falls. These Mississippian pools are comparatively small in area, but can be uncovered with a small percentage of failures by drilling on the local highs revealed by logs of the old Bend wells.

West Texas

Two Fullerton Outposts Show Favorable Structure

Two major extensions for the Fullerton field, Andrews County, were virtually confirmed the past week through the outposts having registered favorable structural position. Frankel Bros' University 1-D, C NW SE Section 3, is considered within the productive limits in logging favorable geological markers in drilling to 3880 feet. Top of Yates sand was called at 2870 feet with elevation of 3290 feet. It is 1 2/3 miles northeast and same distance south by east of nearest production. Magnolia Petroleum Company's Bitler-Lowe 2-A, mile northeast outpost, cemented pipe on top of first oil stain in Clear Fork at 6981 feet, being only 39 feet low to nearest production.

Sinclair Prairie Oil Company's Grisham-Hunter 1, Andrews County wildcat, logged granite at 11,315-11,322 feet, and was awaiting orders. Several unsuccessful attempts were made to complete drill stem-test of Ellenburger topped at 11,191 feet. The Texas Company's Jones 1, near Shafter Lake, was drilling lime 5730 feet with the Glorietta as its objective. Stanolind Oil & Gas Company's Midland Farms Company 1-F, 6½ miles northeast of the north Cowden field, was drilling at 4899 feet to establish the water level. This discovery averaged 200 barrels of 27.6-gravity oil daily on swabbing test at 4825-88 feet.

Pending Wildcats: Seitz-Comegys & Seitz, contracted to drill a 6500-foot Clear Fork test in East Central Cochran County in acquiring a 4400-acre block out of the Mrs. F. B. Cameron acreage in Greer County School Land Surveys 86 and 87. An exploratory test is reported pending for Superior Oil Company of California's block that embraces 16 leases, averaging 6 labors each, in Leagues 79 and 80, Reeves County School lands and Leagues 82, 83 and 84, Shackelford County School Lands, centering upon the Cochran-Hockley County border. In Pecos County, Magnolia Petroleum Company's J. L. McMurtry 1 will try for Ellenburger production in either Section 62 or 66, Block 10, H&GN Ry. Survey.

Hockley County: Stanolind Oil & Gas Company's DeLoach 1, Labor 19, League 80, Reeves CSL and 6⅝ miles southwest of the company's recent Yellow House discovery pumper, was drilling lime at 4652 feet, below the producing zone of the nearest pool. This wildcat logged Brown lime at 3360 feet and San Andres at 3670 feet with elevation of 3657 feet, being 37 feet and 27 feet high, respectively, to the Yellow House discovery.

Winkler County: Gulf Oil Corporation's Keystone 46-E, mile southeast of Ellenburger production in the Keystone field, landed 7-inch pipe on bottom at 9646 feet after flowing at rate of 50 barrels hourly and 4,300,000 feet of gas daily through 3/8-inch choke on testing tool set on top of oil pay at 9536 feet. The Falcon Company's McCutcheon-Humble 3, NE NW SE PSL 15, Block B-2, is showing for 1½ miles southeast extension for the Holt pay, which has accounted for 5 completions in the Keystone field, and was drilling at 4770 feet. Fair porosity and oil stain showed at 4730-56 feet, with elevation of 2952 feet. Richardson & Bass' Kansas City Stock 1, C NE NE PSL 25, Block B-2, mile south of the field, logged gas at 3425-35 feet, and was drilling lime at 3455 feet. In the Wheeler-Ellenburger pool, Stanolind Oil & Gas Company and Shell Oil Company's Wheeler 1-A, most westerly producer, developed 50 percent salt water in flowing its allowable of 220 barrels daily.

Borden County: Northern Ordnance's Clayton-Johnson 1, NWc T&P 32, Block 31, T-4-N, scheduled Ordovician test, logged broken porosity with oil stain and odor from 6245 feet to 6556 feet in Clear Fork series. Top of black shale was called at 5420 feet with elevation of 2481 feet.

Crane County: The Texas Company's Hobbs-Shell 1, first Devonian discovery for Texas and 3¾ miles southwest of nearest production in McCamey field, flowed 204 barrels of oil, averaging 2 percent acid residue, on last gauge before shutting in for storage. This production is from perforations at 5300-50 feet, although the discovery has approximately 120 feet of effective pay. The zone was acidized with 1500 gallons. More perforations are due to be made before completion gauge is taken.

North Texas

Hildreth Field Extension Presages Score of Tests

Expansion of the Hildreth field, Montague County, one mile north and also northwest and west paves the way for the drilling of more than a score of tests. C. H. Murdick, et al's Matney 1, W. E. Davis survey, provided the north extension in making a steady flow through casing that necessitated the use of pressure pumps to kill for installing tubing. Gauge is pending. Production is from perforations at 6000-30 feet in Bend, topped at 5972 feet, 81 feet low to Daube Bros' Prestwood-North 1 which made an average well from perforations at 6080-6114 feet. Murdick, et al's Benton-Moore 1, SE NW NW Section 52 and ¼ mile north of a prolific well, cemented 5½-inch on bottom at 6300 feet after logging broken pay in Bend, topped at 6032 feet, about level with the nearest producer. F. L. Boutell, et al's Brown 2, ¼ mile west of the most westerly well, entered Bend at 6046 feet, 2 feet high to the offset, and logged two oil zones in drilling to 6350 feet. Pipe will be perforated for completion. O. C. Whitaker, et al's Roye 1, is showing for third failure on the east and northeast edge of the field, having tested water in 3 zones of the Bend, topped at 6127 feet, and drilled at 6462 feet.

Clay County: Continental Oil Company et al's Williams 5, southeast edge of the Joy field, established the Detrital zone between Bend and Ellenburger as a new deep pay for the area in flowing 121 barrels of oil on 9-hour gauge through ¾-inch after using 3000 gallons of acid. The well failed to indicate production in the 4000-foot Strawn and 5400-foot Bend zones, but logged broken saturation in Detrital from 5586 feet to top of Ellenburger at 5710 feet. Ellenburger proved barren in drilling to 6145 feet, and the hole was plugged back to 5670 feet for completion with 7-inch at 5594 feet. Bridwell Oil Company's Bridwell River Ranch 1, recent discovery for the west side of county, flowed 112 barrels of oil natural on 7-hour gauge through ¼-inch choke for 2 hours and ¼-inch choke during remainder of test. Production is from Strawn at 4745-70 feet. No water was evident, although the well was believed to have reached the water table in coring the last foot.

East Texas

Oil and Gas Shows Found In Friendship Prospect

The Friendship prospect, Smith County, commanded interest when Bobby Manziel, et al's Morrison 1, S. J. Lott Survey, logged sufficient oil and gas shows in Rodessa series to warrant landing pipe on bottom at 8110 feet for production test. Electrical survey recorded kick at 7921-34 feet in Pettit, topped at 7907 feet with elevation of 382 feet. Travis Peak, entered at 8075 feet, was barren. A cluster of Paluxy failures were drilled on this geophysical high.

Wood County: Shell Oil Company's Herring-Scoggins 1, Samuel Burch Survey and second deep test in the Manziel field, resumed coring after recovering 120 feet of rotary fluid when tester was used at 8459-74 feet in Rodessa series, which showed unusually high porosity, but subnormal in permeability. It is 90 feet low to Shell Oil Company's Whatley 1, southeast outpost that is showing for a small oil well from perforations at 8455-8525 feet. Information gained from these unfavorably situated deep tests raise hopes of a worthwhile deep pay being uncovered in the Manziel area and likewise to the southwest in the Quitman field. Sun Oil Company's Johnston 1, Paluxy failure, remains tied up with a fishing job at 6577 feet with Rodessa as its objective. Amerada Petroleum Corporation's Hague 1, which will be a deep test unless it makes a producer from the Paluxy, was rigged up.

F. R. Jackson-Fisher and Fields' McCarley 1-B, southeast offset to their shutin Woodbine low-gravity discovery for the Oak Grove pool, abandoned in Woodbine water sand at 5819 feet. Oil saturation in the Sub-Clarksville did not warrant running pipe.

Wildcat Starts: In Bowie County, Barnsdall Oil Company authorized Heilborn 2 as a Smackover lime project, being 800 feet west of its 7836-foot failure that made the best showing of any Smackover test drilled in Texas. Clifford S. Shive and associates' Johnson 1 is a scheduled 3500-foot Woodbine test for Henderson County, 7 miles northwest of Trinidad. Third active Travis Peak test for Van Zandt County is Northern Ordnance's Shelton 1, Leander Smith Survey, Martin Mills area. Magnolia Petroleum Company is a substantial lease owner in the area, and contributed $20,000 to the 9000-foot project.

Carthage Well May Link Separate Producing Areas

Union Producing Company's Allums 1, White survey, was a new wildcat location last week in the expanding play around the Carthage gas field of Panola County. The company is planning another test in the area. The new well is three miles north of Carthage and may be a "link" well connecting separated producing areas.

Cass County: C. H. Lyons' Davis 1, J. M. Watson survey, on the northwest side of the Kildare field, is being recompleted, with total depth 6100 feet. The well was brought in as an oil producer several weeks ago, but carried a high gas-oil ratio and Lyons undertook a squeeze job. Formation was being treated with acid after reperforating pipe.

Panola County: Arkansas-Louisiana Gas Company's Pirkle 1, Shields survey, hailed as a 5-mile extension for the Carthage field on showings made before casing was set, had water trouble when completion was attempted from the lime at 5109-17 feet. Operators are squeezing and will retest.

Rogers Lacy's Cameron 1, Lagrone survey, which made oil by heads from 6635 feet and later went dead, still is shut down by high water. Operators were trying to complete with gas lift when the shut down was forced.

McAlester Fuel Oil Company and Grady Vaughn's Hunt 1, wildcat in Wyatt Anderson survey, four miles southeast of Carthage has spudded.

Southport Petroleum Company's Scharnagel 1, Catherine Lindsey survey, 15 miles southwest of Carthage and at least 10 miles from any production, has reported a showing of oil and gas in the lower Pettit zone, but is drilling ahead to the Travis Peak.

Southwest Texas

New Pool Indicated by Victoria County Test

A new pool for Victoria County was indicated by testing in process at Edwin Nielsen's Kounty 1, Block 13, Brown & Dodd subdivision of Agapito de Leon survey, A-63, south of Inez and 1 mile north of the North Keeran gas area. A 15-minute drill-stem test from 4750-56 feet recovered 1020 feet of oil through ¼-inch choke with 160 pounds pressure. Bottom of hole is 4756 feet in Greta with casing set at 4749 feet.

Kingswood Oil Company's Wilden 1, 1 mile west of Victoria field, was coring below 3500 feet. Drill-stem test at 2981-95 had recovered 1020 feet of oily sand.

Nueces County: Drill-stem test at H. R. Smith's Rivers 1, wildcat in Section 301, Bishop subdivision of Palo Alto Grant, 1¼ miles northeast of southeast flank production of Agua Dulce, indicated at least a possibility that a new oil producing area may be brought in soon.

Hewitt & Dougherty's Mumme 1, in Juan Jose de laGarzaMontemayor survey, discovery well of the Dougherty field, made 19 barrels of 36.6-gravity daily on ¼-inch choke, from perforations at 5469-71 feet. The sand is only 2 feet thick. Total depth is 6043 feet.

Duval County: Harvey, Henderson & O'Neil's J. F. Welder Estate 1, wildcat in Sam Alexander survey 120, 1½ miles southeast of Eagle Hill field, showed 125 feet of oil on drill-stem test from 2069-76 feet. It was waiting on cement with 5½-inch casing at 2069 feet, and bottom of hole at 2076 feet.

Willacy County: Willamar was extended a mile north by Humble Oil & Refining Company's Sauz Ranch 1, on Share 64, San Juan de Carricitos grant, 4300 feet northwest of Pan American's Rodriguez 1. Initial potential is 184 barrels of 30-gravity oil through 3/16-inch choke. It was drilled to 8022 feet in shale, casing was set on bottom, and perforations made in sand at 7867 feet.

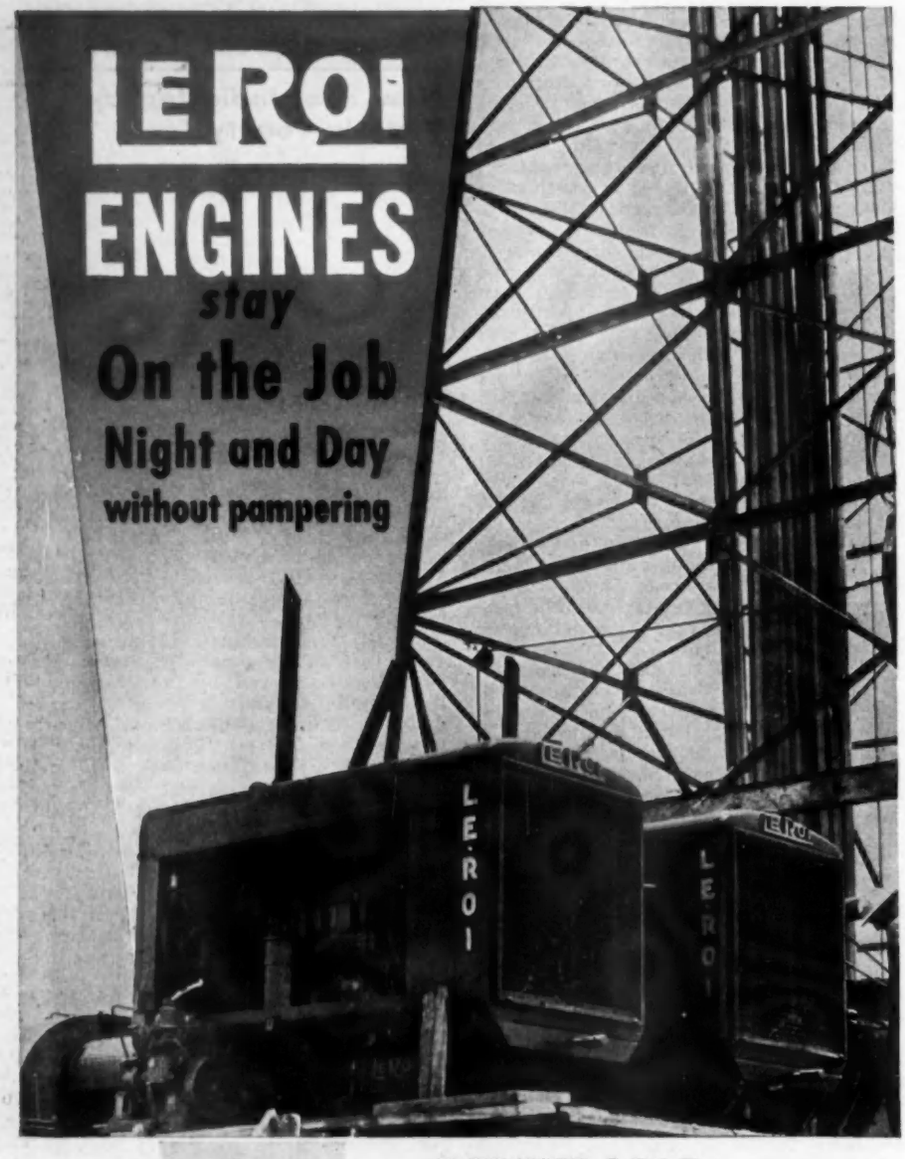
Texas Gulf Coast

Harris County Wildcat Is Reported at 7505 Feet

Danciger Oil Refining Company's Sellers 1, NE, HT&B 2, 1 mile west of Spring, in Harris County, drilling tight, is reported to be around 7505 feet, with 5½-inch casing set at 6247 feet. A show of gas was reported below 6800 feet.

Hardin County: Potential on the H&TC Fee 1, discovery well brought in recently by American Republics Corporation-Houston Oil Company of Texas, was announced as 192 barrels 37.6-gravity oil per day, ¼-inch choke. Total depth is 6650 feet with production coming from the Cockfield at 6234-43 and 6247-52 feet. This producer is in H&TC 189, a mile west of the same operators' Olive Sternenberg 1, brought in a few days previously.

Polk County: Humble Oil & Refining Company's Granbury 32, Wilcox test in Section 2, A. Viesca Grant A-77, Livingston field, is drilling at 6935 feet. Wilcox production in this field was opened about a month ago in the same operators' Granbury 7, and drilling has continued despite the failure to achieve production from Wilcox or Sparta sands in the Granbury 31.



. . . to give you DEPENDABLE power regardless of the depth you drill

Actual users on the job depend on Le Roi power to give them uninterrupted service on a steady 24-hour grind. These dependable valve-in-head engines have established a reputation for constant, reliable service, low maintenance cost, and economical operation.

Near Okenaah, Okla., the two 6-cylinder, 185 H.P. drilling engines illustrated above have demonstrated their ability to stay on the job when the going was tough. For long-life, low-cost, trouble-free operation . . . for flashing, flexible power plus fuel economy, be sure that Le Roi Engines power your drilling rigs. Complete range of sizes up to 400 H.P. Use natural gas, gasoline, or butane. P-27

Consult your nearest Le Roi distributor.

Le Roi Company

1756 South 68th Street • Milwaukee 14, Wisconsin

Branch: TULSA, OKLAHOMA

• DISTRIBUTORS •

Southern Engine & Pump Co. Houston, Dallas, Kilgore, Texas

General Machine & Supply Co. Wichita Falls, Odessa, Texas

Western Machinery Co. St. Louis, Mo., Centralia, Illinois

Le Roi Rix Machinery Co. Los Angeles, California

LE ROI

South Louisiana

Three New Locations as Wildcats Ready for Test

Humble Oil & Refining Company has staked Williams 1, Section 31-7s-8e, Ponchatoula area, Tangipahoa Parish, scheduled for 9500 feet. It is the second test in the area for the company. Rathborne Land Company 1, 25-7s-7e, was abandoned earlier this year at 9314 feet.

Assumption Parish: Tide Water Associated Oil Company's Kessler-Sternfels Unit 2, Section 132-12s-14e, on the east flank of Napoleonville Dome, completed for 24.5 barrels of water-white 52.2-gravity condensate daily with 1,300,000 cubic feet of gas from 8993-9010 feet, on ¼-inch choke. Casing was set to bottom at 9034 feet. The discovery well of this area was brought in a year ago at George Echols' Kessler-Sternfels 1, and produced 192 barrels of 37.5-gravity oil from perforations at 9034-38. The new well runs higher formations.

Acadia Parish: Union Sulphur Company's Edward E. Daigle 1, Section 49-7s-2e, southwest of Church Point, was taking sidewall samples in side-tracked hole drilled to 10,750 feet. Hole was redrilled after a near blowout in sand topped at 9815 feet and the loss of some tools. Seven-inch casing has been set at 9686 in side tracked hole.

Sun Oil Company's C. J. Freeland 1, Section 29-9s-1w, northeast extension test at Egan field, was drilling at 9539 feet.

Calcasieu Parish: Potential on Continental Oil Company's Prairie Land & Canal Company 1, Section 2-11s-9w, discovery well at East Moss Lake, was announced as 175 barrels of 53-gravity condensate per day on 8/64-inch choke, from perforations at 10,410-20 feet. Total depth of well is 11,319 feet.

Terrebonne Parish: Union Producing Company and Fohs Oil Company have not yet succeeded in completing Buckley-Bourge 2, Section 1-20s-16e, in the Delarge area, which would be the world's deepest producer if salt water could be shut off from seepage in casing above perforations at 13,498-510 feet. Hole originally went to 13,588 feet, was plugged back and drilled out to 13,515 feet. Last drill-stem test made in perforations showed water cushion, a good blow, which decreased; final recovery was 13 stands of mud, 61 stands of salt water, and some oil. Perforations were squeezed, and new tests will be made next week.

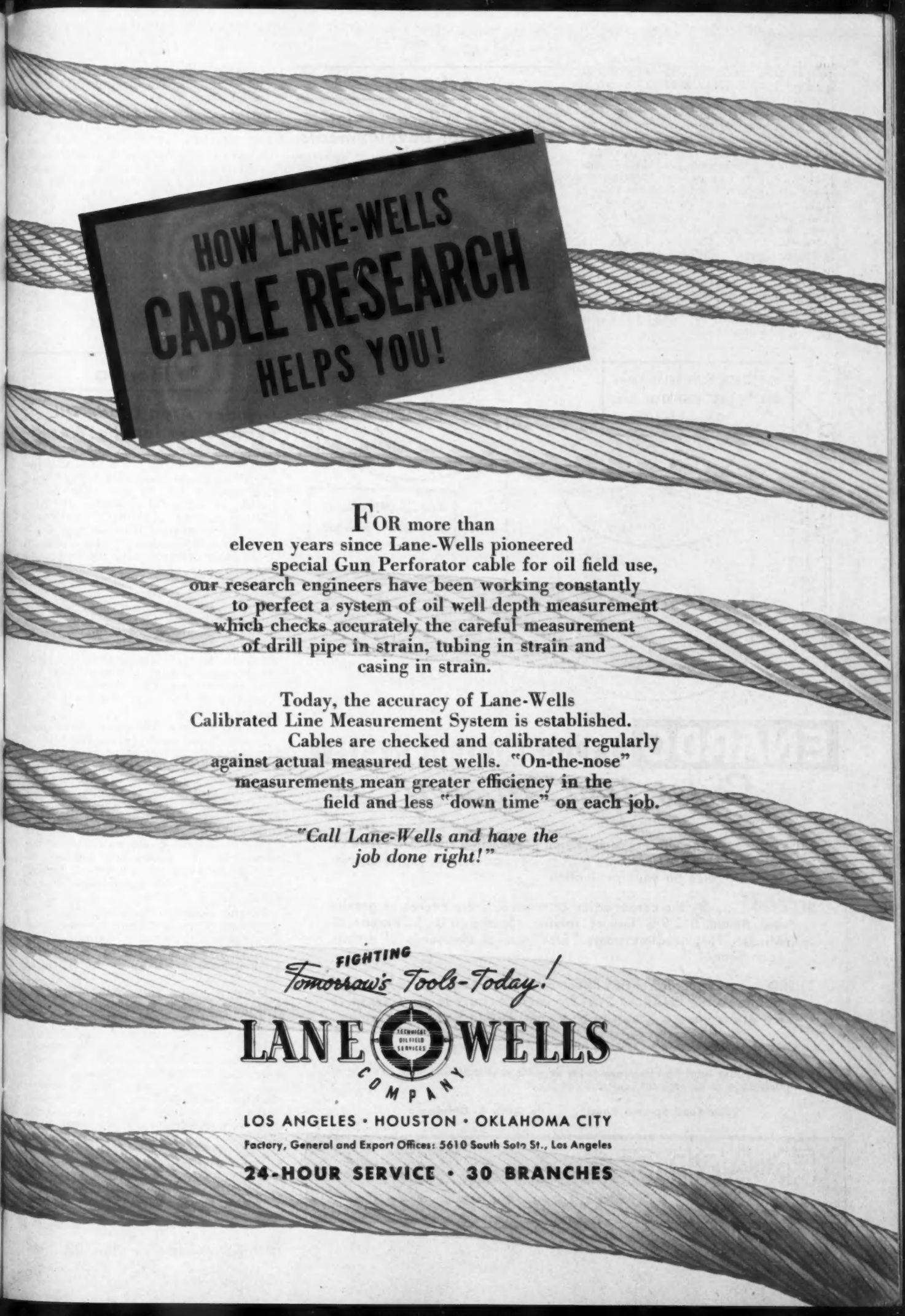
North Louisiana

Placid to Test Favorable Horizons in Deep Wildcat

North Louisiana's deepest wildcat, Placid Oil Company's Tremont F-1, 14-9-2, LaSalle Parish, bottomed at 12,000 feet, is testing around 5300 feet and operators plan to test other favorable horizons in the deep well.

Northern Ordnance's C. McMullen 1, 20-13-2, Caldwell Parish, shut down for several weeks at 8003 feet, will be carried on down, operators have announced.

DeoSto Parish, where several wildcats are drilling, had one new exploratory location during the week, C. W. Beene's Williams 1, SW NE 25-15-15, and had



FOR more than eleven years since Lane-Wells pioneered special Gun Perforator cable for oil field use, our research engineers have been working constantly to perfect a system of oil well depth measurement which checks accurately the careful measurement of drill pipe in strain, tubing in strain and casing in strain.

Today, the accuracy of Lane-Wells Calibrated Line Measurement System is established. Cables are checked and calibrated regularly against actual measured test wells. "On-the-nose" measurements mean greater efficiency in the field and less "down time" on each job.

"Call Lane-Wells and have the job done right!"

FIGHTING *Tomorrow's Tools-Today!*

LANE WELLS COMPANY

LOS ANGELES • HOUSTON • OKLAHOMA CITY

Factory, General and Export Offices: 5610 South Soto St., Los Angeles

24-HOUR SERVICE • 30 BRANCHES

one failure, Dale W. Moore's R. N. Parker 1, NE NE 6-13-13, a Holly field outpost, abandoned at 3003 feet.

Cotton Valley Operators' Gray 1, 26-21-10, deep exploratory well in the Cotton Valley area, Webster Parish, has set 7-inch to 10,680 feet and operators say test will continue past 11,300 feet.

H. L. Hunt has moved location for Manfield 1, SE SW 5-12-4, Winn Parish, three miles northeast of the Calvin distillate discovery of last year. Location is on the edge of a salt dome.

Joe M. Burnham's Noel 1, SW NE 11-19-16, Caddo Parish, was reported to have made a good showing of both oil and gas when tested between 2477-2508 feet, but water trouble developed and a squeeze job is under way. The well is 4 miles east of Caddo Lake production.

Arkansas

Scattered Wildcats Being Watched for Developments

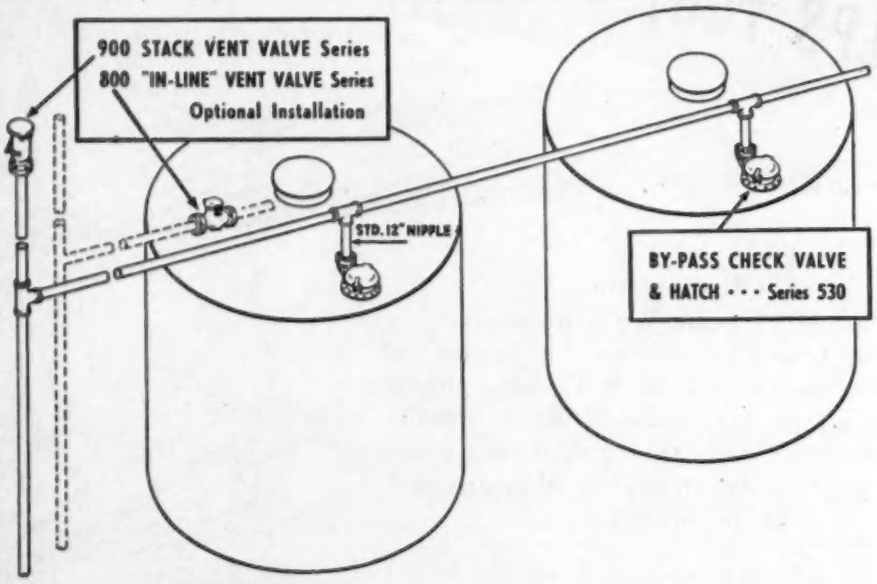
Three scattered wildcat wells in South Arkansas are reaching interesting depths and a fourth is making drill-stem test.

Davis Rubber Company's Farris 1, C SE NE 27-15-15, Ouachita County wildcat that has been beset by trouble, is drilling again and is below 4450 feet. Barney Dunlap's Hart 1, C SE SW 17-13-21, Nevada County, is below 4100 feet. Curtis Kinard's W. I. Payne 1, 18-10-7, Lincoln County, is below 2250 feet.

In Ashley County Union Producing Company's Crossett E-1, 12-9-7, is preparing for drill-stem test around 5210 feet, after coring from 5190 to 5210 feet. This is the third wildcat on the extensive Crossett block.

Royal Oil & Gas Company abandoned its McWilliams-Sanford wildcat, C NE NW 23-13-24, at 4523 feet. Southern United Gas Company also abandoned its Franklin County wildcat, G. C. Carter 1, C NE SW 21-9-27, total depth 4301 feet.

Extension of the Schuler field of Union County received a setback when Marine Oil Company's Fee 1, C NE NE 20-18-7, made a strong flow of salt water and little oil and gas on test of the Cotton Valley formation, after perforation between 7930-50 feet. Marine Oil Company's Bank 1, C SE SE 7-19-13, in the vicinity of Hillsboro in Union County, is drilling at 5600 feet.


900 STACK VENT VALVE Series
800 "IN-LINE" VENT VALVE Series
Optional Installation
STD. 12" NIPPLE
BY-PASS CHECK VALVE
& HATCH · · · Series 530

ENARDO VAPOR CONTROL SYSTEM
Saves You Money

FIRST . . . By the conservation of rich condensible vapors in crude oil storage. ENARDO prevents gravity loss and assures you of obtaining full price on your production.

SECOND . . . By the conservation of volume. Every degree of gravity loss means a 2.9% loss of volume. (Source — U. S. Bureau of Mines). This needless waste "robs" you of thousands of dollars each year.

THIRD . . . By the prevention of corrosion in tankage due to hydrogen sulfide as the ENARDO SYSTEM excludes outside air. Oxygen of the atmosphere is known to be a contributing factor to corrosion.

ENARDO EQUIPMENT on your tankage results in definite savings.

Why not see your local tank company today or write us direct? Our engineering staff will gladly assist in working out your problems.

2729 Sand Springs Road . . . . Tulsa 6, Oklahoma

ENARDO Foundry and Mfg. Co.
TULSA, OKLA.

California

Greeley Area Leads Oil Exploration for the Week

With a 2500-barrel completion confirming the discovery of a new pool just off its southeast tip, and a second wildcate nine miles to the west having cored oil sand, Greeley area of Kern County was the California exploration district of greatest interest last week. Superior Oil Company's Houghton 36, 35-29-26, is credited with the discovery, the flow rate of about 2500 barrels of 38-gravity clean oil from an 82-foot interval around 6600 feet, having been reported by scouts but not confirmed by the company. The new find of sand in the westward area was picked up by Richfield Oil Corporation's Goosloo 1, 20-29-25, Goose Slough area, at about 10,000 feet, and a formation test has been undertaken. This showing is more than four miles from nearest Greeley production.

Favorable results from these two wildcats have given encouragement to an unusually heavy exploration campaign centered in areas generally referred to as part of the Greeley district. Twelve other wildcats, most of them 10,000-footers or deeper, are at various stages of drilling, with several now nearing objective depths. All are based on hopes of picking up the counterpart of rich production already exploited in Rio Bravo, Greeley, Strand, Canal, Ten Sections and Canfield Ranch fields of that locality.

Fresno County: Seaboard Oil Company and Pure Oil Company are joint participants in a new Cantua Creek area exploration project, their initial wildcat being located near the center of 22-16-13.

Kern County: Important tests that will give clues to the possible extent and trend of the Section 27 Pool, newly discovered pay horizon of Buena Vista field, will be made during the weekend. Standard Oil Company's 88, a half-mile step-out north of the discovery, will be on production test from an identical sand section about 500 feet higher on structure. To the west, a half-mile from the discovery, the same company's No. 306 will be due to core the top of the pay; and nearly the same distance eastwards from the discovery hole, Tide Water Associated Oil Company's first test on offset acreage will be coring for markers above 3000 feet. Success of these outposts would throw

ANNOUNCEMENT

We wish to announce the **purchase of all stores and inventory of the Atlas Supply Company** of Muskogee, Oklahoma, on May 15, 1944.

Effective on that date, all stores formerly operated by the Atlas Supply Company began operation under our direction as Jones & Laughlin Supply Company stores without any interruption of service to former Atlas customers.

The Atlas Supply Company had served the oil and gas industries for many years, during which time it rendered capable, efficient and friendly service to its host of customers. To all of these we extend a cordial invitation to continue to make our stores and sales offices a source of supply for oil field supplies and equipment.

The consolidation of facilities and inventories heretofore maintained by Atlas with those of our organization enables us to offer to our trade an exceptionally complete service.

JONES & LAUGHLIN SUPPLY COMPANY

TULSA, OKLAHOMA

into operation plans for widespread development in the new pool which now is believed to cover several thousand acres.

Promising oil sand was cored in Tide Water Associated Oil Company's Section 18-30-29, Mountain View area wildcat, between 4395-4420 feet. On formation test the well showed a strong blow with recovery of 320 feet of gassy, oily mud and no free water.

San Luis Obispo County: A wide sweep of prospective territory in the Temblor Range southwest of North Midway field has been blocked by Richfield Oil Corporation, and exploration will begin next week with a wildcat in 36-31-21. Shell Oil Company and several other major companies are represented by large holdings in the district.

Rocky Mountain Area

Lakota Sand Pool to Be Tested in North McCallum

Continental Oil Company's Sherman 2, C NE SW 12-9n-79w, in the North McCallum field, Jackson County, Colorado, drilled 20 feet of oil-saturated Lakota sand, top at 5780 feet, showing possibility of opening up a new pay horizon. Drilling will continue to the base of the Lakota sand before tests will be made of the sand. North McCallum produces 52.5-gravity oil from the Dakota sand (Upper Cretaceous) with heavy flows of carbon dioxide and the freezing action of the expanding gas makes producing the oil difficult. All of the land covering North McCallum is public domain and is unitized with Continental Oil Company the unit operator.

Golden Eagle: Pioneer Oil Corporation developed an estimated 1,000,000 cubic feet of dry gas on drill-stem test, open 33 minutes, in the first Frontier sand at 5768-5821 feet, in Unit 1, C NE SW 12-45n-97w, on the Golden Eagle structure in Hot Springs County, Wyoming, and is drilling ahead to test possibilities of oil production in the lower Frontier sands. Golden Eagle is an exhausted gas field, abandoned in 1936, and four wells drilled on the structure produced an estimated 2 billion cubic feet of gas over a 10-year period, producing from around 2500 feet.

Little Dome: Superior Oil Company is drilling at 855 feet in Little Dome 1, SW SE SE 10-5n-1w, Tensleep test on Little Dome on the Maverick Springs anticline, Fremont County, Wyoming, 6 miles southeast of the Maverick Springs black-oil field.

WESTERN CANADA

Newest Taber Field Well Good for 150 Barrels

Dominion Oil-Nassau Explorations' Taber-Province No. 73-20B, SE lsd 5 20-9-16w4th, Taber field, swabbed 225 barrels daily of 18-gravity oil. Initial performance indicates 150-200 barrels daily on pump.

Drilling Active In Western Canada

On May 1, 48 wells were drilling in Western Canada, including 3 in Saskatchewan and 45 in Alberta. Those in Saskatchewan include 1 each in the Central Butte, Corinne, and Unity-Vera areas. Half of Alberta's drilling wells are outside Turner Valley, 23 being active in that field. Taber is the next most active field with 5 rigs in operation. Conrad area had 3 and Twin River 2, while every other field or wildcat area had 1 drilling well each.

Wells Drilling in Western Canada on May 1, 1944

(Drilling, shut down, derricks, locations, and total.)

Field or Area	Dr.	S.D.	Dk.	Loc.	Total
Alberta:					
Turner Valley	23	..	3	..	26
Aldersyde	1	1	..	..	2
Athabaska	..	..	1	..	1
Armelgra	..	..	1	..	1
Bruderheim	..	..	..	1	1
Coalspur	..	..	1	..	1
Conrad	3	..	..	..	3
Del Bonita	1	..	..	..	1
Grassy Lake	1	..	..	..	1
Innisfree	..	1	..	..	1
Jumping Pound	..	..	1	..	1
Kinsella	..	..	1	..	1
Legend	1	..	..	..	1
Lloydminster	1	..	..	..	1
Moose Dome	1	1	..	..	2
Milk River	1	..	..	..	1
Pouce Coupe	..	..	..	1	1
Pinhorn	..	1	..	..	1
Princess-Steveville	..	..	..	1	1
Ram River	1	..	..	..	1
Pincher Creek	1	..	..	..	1
Rusylvia	1	..	..	..	1
Taber	5	1	..	1	7
Twin River	2	..	..	..	2
Vermilion	1	..	..	1	2
Watson	1	..	..	..	1
Saskatchewan:					
Central Butte	1	..	..	..	1
Corinne	1	..	..	..	1
Unity-Vera	1	..	..	..	1
State or District Total	48	5	8	5	66

FOR SALE

■ Heavy duty drilling rig with 9300' 4½" API full hole drill stem, major parts almost new, first class condition, unitized throughout. Address: Box 50, The Oil Weekly, Houston, Texas.

■ For Sale: Two Westinghouse Drilling Motors 15/35 H.P. complete with grids, switch boxes, control wheel and countershaft. Three Clark 80 H.P. 2 cycle engines and compressor cylinders size 20" and 14" ready operate. Condor Petroleum Company, Abilene, Texas.

■ FOR SALE: Wilson Mogul Drill-In, Clean-out Unit with 120 H.P. Waukesha Motor, and compound gear box. Mounted on all steel dual wheel semi-trailer with new 10:00 x 20 prewar tires. 65' A. type telescope mast and string of small tools. Like new and ready to go. Recommended to operate easily to 6500'. Address: Baker & Camp Company, P. O. Box 247, Breckenridge, Texas.

ADVERTISING RATES

TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, THE OIL WEEKLY
P. O. Box 2608 Houston 1, Texas

HELP WANTED

■ A leading Oklahoma manufacturer of oil field equipment wishes to employ a man capable of handling work analysis and routing, time studies, and similar duties in the manufacturing section. Address M. G. McCool, American Iron & Machine Works Company, Oklahoma City, Oklahoma.

■ FORMER ENGINEERING STUDENTS—Major oil company desires applications of persons who are interested in getting into the petroleum industry and who have been engineering or geological students in a reputable school or university. Experience helpful but not essential. Do not apply if employed in essential activity at highest skill. Address: Box 35, c/o The Oil Weekly, Houston, Texas.

ELECTRONIC ENGINEER

Independent organization wants engineer with good basic foundation in electronics and some experience in well logging for responsible position. Would like man who feels he has exhausted the possibilities of his present job. Give experience, qualifications, salary desired and complete information in reply which will be considered confidential. Address: Box 51, c/o The Oil Weekly, Houston, Texas.

■ **WANTED: A Petroleum Engineer with field experience, for engineering development work, with a large manufacturer of oil field equipment and materials. Permanent position with good future for right man. In replying state age, education, business background, salary desired, etc. Address: Box 38, c/o The Oil Weekly, Houston, Texas.**

■ OLD and well established oil tool manufacturer desires traveling Sales Representative. Position requires experience and satisfactory acquaintance with engineering and purchasing departments of oil producing companies, particularly in Gulf Coast and Mid-Continent districts. Give full particulars in reply. Address: Box 52, c/o The Oil Weekly, Houston, Texas.

■ Young men with engineering or geological experience or training wanted for geophysical work with large Oil Company, Rocky Mountain area: Address: Box 47 The Oil Weekly, Houston, Texas.

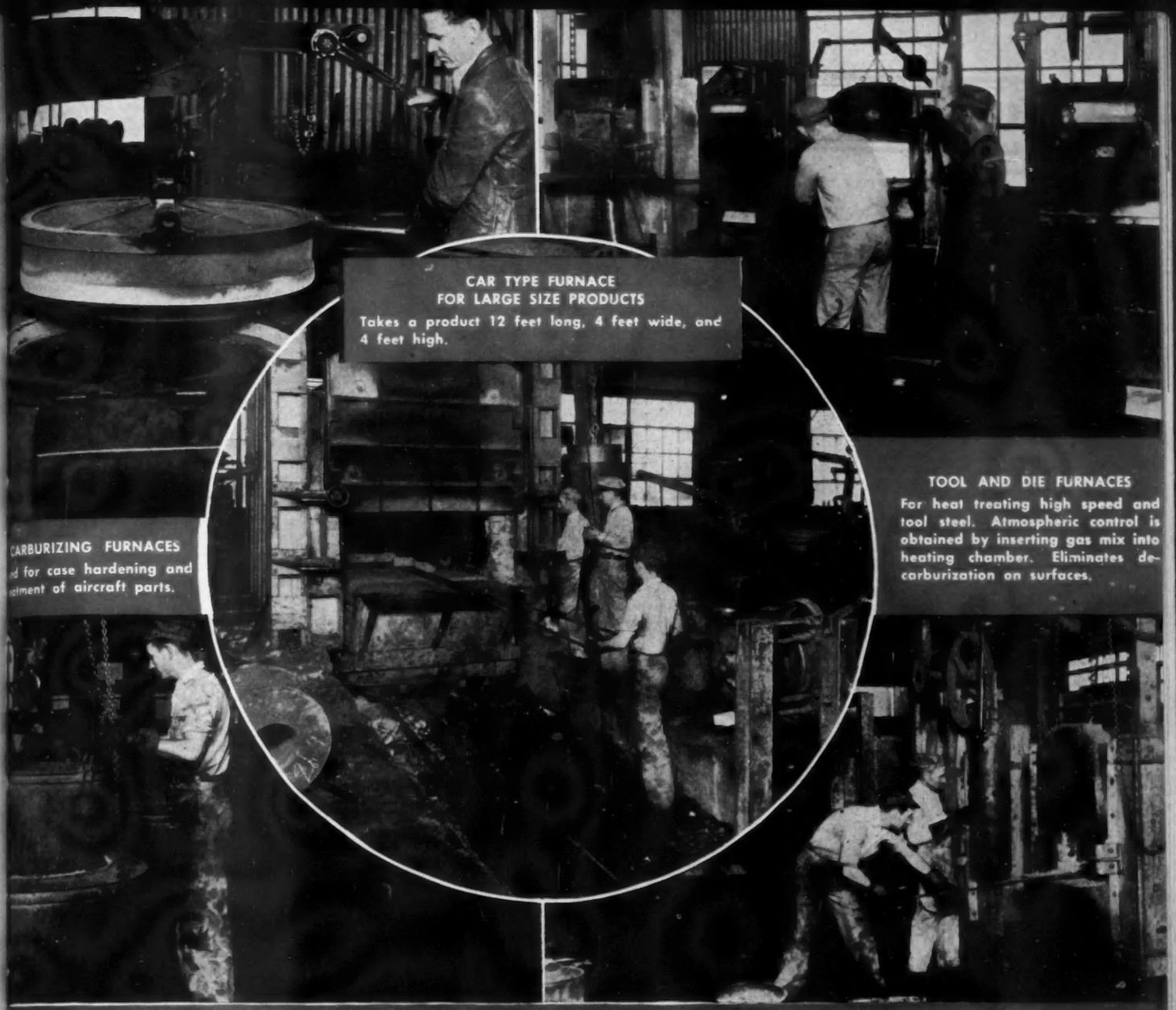
WANTED TO BUY

■ Two new style Askania Magnetometers. Address: Sidney A. Stubbs Oil Properties, 119 East Park Avenue, Tallahassee, Florida.

■ 2000 to 3000 feet of 2-inch upset seamless tubing in 20 or 30-foot lengths with tool joints not larger than 3⅜-inch O. D., suitable for use as drill pipe on Failing core drill. Merry Bros. & Perini, Box 840, Abilene, Texas.

■ Model H Cardwell with Waukesha motor in good condition. Write details including price to Box 2967, Odessa, Texas.

■ MAGNETOMETER WANTED. An Askania vertical component magnetometer, preferably with a temperature compensated magnetic system. The Mining Corporation of Canada Limited, 350 Bay Street, Toronto 1, Canada.



CAR TYPE FURNACE FOR LARGE SIZE PRODUCTS

Takes a product 12 feet long, 4 feet wide, and 4 feet high.

CARBURIZING FURNACES

...ed for case hardening and ...atment of aircraft parts.

TOOL AND DIE FURNACES

For heat treating high speed and tool steel. Atmospheric control is obtained by inserting gas mix into heating chamber. Eliminates decarburization on surfaces.

DRAW FURNACES—CONVECTION TYPE

...erature control of this type of furnace makes for uniformity; ... product being drawn is kept at the same temperature, giving ...ural uniformity.

A BATTERY OF GAS FIRED FURNACES

Each of Cook's heat treating furnaces is controlled by electric recording thermocouple pyrometers, assuring uniform heat treatment. *Tougher, longer-lasting steel results from this carefully controlled heat treating.*

Cook's Heat Treating to exacting standards . . .
finest heat treating equipment . . . skilled and long experienced personnel
plus
determination to be leaders in all heat treating techniques

assures you

UNIFORM HARDENING . . .
IDENTICAL PHYSICAL CHARACTERISTICS . .
TOUGHER, LONGER LASTING STEEL
THAT WINS YOU CUSTOMERS
AND HOLDS THEM.

CALL OR WRITE

COOK HEAT TREATING CO.

OF TEXAS

6233 Navigation Blvd.

HOUSTON 11, TEXAS

W.-4181

MTI MASTER CRAFTSMEN
METAL TREATING INSTITUTE

U. S. Exploratory Completions

ALABAMA WILDCAT

Washington County—Failure: Humble's C. D. Scott 2, se nw 33-6n-4w, abnd 7327 ft.

ARKANSAS WILDCATS

Franklin County—Failure: Southern United Gas Co.'s G. C. Carter 1, c ne sw 21-9-27, abnd 4301 ft.

Hempstead County—Failure: Royal Oil & Gas Corp.'s McWilliams-Sanford 1, c ne nw 23-13-24, abnd 4523 ft.

CALIFORNIA WILDCATS

Fresno County—Failure: Superior's 2, S. J. Props. 31-9, nw ne nw 9-15-17, Raisin City area, Kreyenhagen 5811 ft, Dominguez 6331 ft, Cretaceous 6370 ft, abnd 6593 ft.

Glenn County—Failure: Superior's Mary Morris 1, 7925 ft n 1980 ft w nec sec. 3, Glenn Ranch sur 12-21-2, Chico area gas test, abnd 5054 ft.

Kern County—Failures: Amerada's Ant Hill-S.P. 35-9, nw ne sw 9-29-29, Ant Hills area, bentonite 3750 ft, Vedder 4000 ft, schist 4670 ft, abnd 4747 ft.

Barnsdall Oil Co.'s M. & W. 1, se sw nw 34-29-21, McKittrick area, abnd 1948 ft.

Honolulu-Barnsdall Oil Co.'s Liberty Farms 1, nw ne ne 18-5-3, Liberty Island gas test, abnd 5760 ft.

Obispo and Brookshire Oil Co.'s Stone 1, se se ne 1-12-11, Dos Palos area gas test, Kreyenhagen 2860 ft, base 3560 ft, abnd 5090 ft.

ILLINOIS WILDCATS

Bond County—Failure: Texas Co.'s Enloe 1, se se nw 6-4n-2w, abnd 3397 ft.

Clark County—Failure: Beatrice Creamery's Chicago Cold Storage Co. 1, ne nw nw 26-12n-13w, abnd 1100 ft.

Clinton County—Failure: Texas Co.'s Schumacker 1, nw nw ne 29-3n-4w, abnd 2426 ft.

Effingham County—Failure: Luttrell's et al's Curry 1, ne ne nw 25-7n-5e, abnd 2565 ft.

Lawrence County—Failure: Bridge's Gaddy 1, ne se nw 26-2n-13w, abnd 2630 ft.

Marion County—Failure: Texas Co.'s J. Rhoads Comm. 1, nw nw sw 14-3n-2e, abnd 2390 ft.

Montgomery County—Failure: Texas Co.'s Springfield-Marine State Bank, ne ne se 32-10n-3w, abnd 2952 ft.

White County—Failures: Lane et al's De-Board 1, ne ne sw 32-5s-8e, abnd 3418 ft.

Brehm et al's Seal-Fulkerson Comm. 1, nw se nw 15-6s-10e, abnd 3072 ft.

KANSAS WILDCATS

Barton County—Failure: Hartman's Powell 1, nw nw 1-20s-13w, Lans 3184 ft, abnd 3315 ft.

Ellsworth County—Failure: Bridgeport's Shanalac 1-E, nec se 29-15s-9w, Cong 3132 ft, Arb 3135 ft, abnd 3233 ft.

Graham County—Failure: Anderson Prichard et al's Gudgell 1, sw sw ne 15-6s-22w, Topeka 3308 ft, Cong 3811 ft, Arb 3860 ft, abnd 3966 ft.

Harvey County—Discovery: Holl et al's Lagree 1, nw nw se 9-23s-3w, Miss 3262 ft, shot 20 qts 3316-26 ft, swab 10 bbls per hr, td 3385 ft.

Lincoln County—Failure: Dickey Oil's Eckart 1, swc 24-11s-7w, Miss 3393 ft, Hunton 3667 ft, Arb 4081 ft, abnd 4144 ft.

Marion County—Failure: Wolf Creek's Unran 1, se ne sw 33-19s-1e, Miss 2769 ft, abnd 2831 ft.

McPherson County—Failure: Phil-Han et al's Keifer 1, nw nw se 11-19s-1w, Miss 2871 ft, abnd 2890 ft.

Morris County—Failure: Landon's White 1, cnw nw 6-15s-6e, Miss 2238 ft, Hunton 2416 ft, abnd 2417 ft.

Pratt County—Failure: Shell's Wendel 1, se ne ne 31-29s-11w, Arb 4812 ft, abnd 4852 ft.

Reno County—Failure: Falcon Seaboard et al's Miller 1, swc 26-25s-10w, Miss 3906 ft, Arb 4331 ft, abnd 4350 ft.

KENTUCKY WILDCAT

Henderson County—Failure: National Assoc. Pet.'s Jacobs 1, 25-P-23, abnd 2726 ft.

NORTH LOUISIANA OUTPOST

DeSoto Parish — Holly Failure: Dale W. Moore's R. N. Parker 1, ne ne 6-13-13, abnd 3003 ft.

SOUTH LOUISIANA WILDCATS

Plaquemines Parish—Alliance Area Failure: Texas Co.'s Louisiana Citrus Lands 1, 4947 n 4835 e of nec 48-16s-24e in sect. 16-16s-24e, abnd 11,083 ft.

Vermillion Parish—Freshwater Bayou Failure: Union Oil of Calif.'s Louisiana Furs C-2, start sec. T-15s-1e, go s 17° 30 mins e 17,323 th s 55° 30 mins e 100 in 31-16s-2e, abnd 12,390 ft.

MICHIGAN WILDCATS

Bay County—Failure: Chapman Oil Co.'s Zboralski 1, s½ se nw 18-15n-3e, Dundee 2972 ft, abnd 3189 ft.

Gratiot County—Failure: H. O. Butler's Beach 1, e½ nw nw 33-11n-4w, abnd 1010 ft.

Mecosta County—Failure: Maguire's Oliver 1, s½ se ne 11-14n-7w, abnd 1548 ft.

Newaygo County—Failure: Pure's Peterson 1, e½ se nw 16-11n-11w, Traverse 2597 ft, Monroe 3071 ft, abnd 3230 ft.

Oceola County—Failure: Sun's Richardson 4, s½ ne nw 23-18n-9w, Dundee 3394 ft, abnd 4016 ft.

Otsego County — Failure: Rinehart & Hickok's Ausable 6, sw sw sw 22-30n-3w, abnd 3949 ft.

Ottawa County—Failure: C. A. Perry's Boerma 1, ne se ne 35-7n-15w, Traverse 1643 ft, abnd 1720 ft.

Washtenaw County—Failure: W. H. Colvin's Voss 1, sw nw ne 16-1s-7e, abnd 6410 ft.

MISSISSIPPI WILDCATS

Attala County—Failure: A. E. Roscoe's Zelda Sims 1, 12-14n-6e, abnd 4437 ft.

Claiborne County—Failure: Freeport Sulphur Co.'s W. R. Hammett 5, 13-11n-1e, abnd 2022 ft.

MISSISSIPPI OUTPOST

Jasper County—Heidelberg Failure: Gulf's Gus Husband 1, nw se 25-1n-12e, abnd 5716 ft.

NEW MEXICO WILDCATS

Chaves County—Failure: Humble's State 1-N, c se sw 35-14s-17e, elev 3615 ft, Abo 1900 ft, abnd in igneous rock 4014 ft.

Eddy County—Failure: Standard of Texas' Wilson 1, Unit 3, c sw se 3-22s-25e, elev 3737 ft, Delaware sand 2205 ft, abnd 3209 ft.

OKLAHOMA WILDCATS

Creek County—Failure: Jackson's Berryhill 1, se sw ne 11-18n-10e, Lay 916 ft, Bart 2044 ft, abnd 2366 ft.

Noble County—Failure: Fox & Fox Curby 1, sw se se 22-24n-2w, Arb 5010 ft, abnd 5100 ft.

Pottawatomie County: Texas Co.'s McLaughlin 1, nw ne sw 32-9n-2e, Wx 5973 ft, abnd 6028 ft.

EAST TEXAS WILDCATS

Camp County—Failure: Mid-Continent's McGahee 1, 2000 ft wel 4800 ft nsl, Harrison CSL sur No. 2, A-54, elev 429 ft, Pecan 2455 ft, base Austin 3783 ft, Sub-Clarksville 3780 ft, Woodbine 4125 ft, Georgetown 4600 ft, Mainstreet 4880 ft, Paluxy 5706 ft, Glen Rose 6050 ft, massive 7183-7370 ft, Gloyd 7650 ft, Pittsburg 7997 ft, Travis Peak 8045 ft, abnd 8352 ft.

Camp County — Failure: Tide Water-Seaboard's Roberts 1, 630 ft ewl, 467 ft snl of 150-ac tr, Obediah Hendricks sur, A-57, elev 347 ft, Sub-Clarksville 4015 ft, Georgetown 4885 ft, Paluxy 5805 ft, Glen Rose 6200 ft, massive anhydrite 7550-7744 ft, Pettit 8398 ft, Travis Peak 8587 ft, abnd 8700 ft.

Henderson County—Failure: Delta Dr. Co. et al's Texas Pecan Nursery 1, 4447 ft fr m/n/n 660 ft fr m/e/el, J. M. Arnest sur, elev 400 ft, Woodbine 4780 ft, Georgetown 5755 ft, Mainstreet 6125 ft, Ft. Worth 6615 ft, Goodland 6975 ft, Paluxy 7165 ft, Glen Rose 7530 ft, massive anhydrite 9245-9548 ft, James 10,096 ft, Pettit 10,310 ft, Travis Peak 10,497 ft, abnd 10,714 ft.

Houston County — Failure: Continental's Crowley 1, 5000 ft snl, 11,000 ft wel, Ignacio Lopez sur, abnd 3500 ft.

Hunt County—Failure: Hollandsworth Dr. Co.-Stanolind's Kimball 1, 2257 ft nsl, 5750 ft wel, Jas. Cole sur, elec 535 ft, Austin chalk 2550-2910 ft, Sub-Clarksville 2970 ft, Woodbine 3600 ft, Georgetown 4370 ft, Paluxy series 4743 ft, Glen Rose 4820-5209 ft, abnd.

Panola County—Failure: H. L. Hunt's Bailey & Martin 1, J. J. Martin sur at Darco, abnd 7000 ft.

EAST TEXAS OUTPOST

Smith County—Sand Flat Failure: Humble's Shamburger 1, 1680 ft nsl, 990 ft ewl, Thos. Hawkins sur, elev 532 ft, Woodbine 5085 ft, Georgetown 5881 ft, Goodland 7325 ft, Paluxy 7523 ft, abnd.

NORTH TEXAS WILDCATS

Archer County—Failures: D. H. Bolin et al's Abercrombie-Allsman 1-A, 800 ft nsl, 1988 ft wel, H. Allsman sur A-753, abnd 1540 ft.

D. H. Bolin et al's Key 1, 7273 ft snl, 1279 ft ewl, A. J. Richardson sur A-356, abnd 1383 ft.

Fortex Oil Corp.'s Wilson-McCrory 1, 2340 ft snl, 1920 ft ewl, S.P. Ry. sec 1, A-412, abnd 1675 ft.

Jack L. McMahon, O'Donohoe & Kelleher's Wolf 1, 800 ft snl, 1400 ft wel, S. P. Ry. sec 2, A-1300, abnd 1460 ft.

Wise County—Failure: Stanolind's Lewis 1, c sw sw Falls CSL sec 8, elev 1049 ft, Bend 5585 ft, abnd 5890 ft.

Young County—Failures: L. T. Burns et al's

Good Copy!

SOUTHWESTERN GAS & ELECTRIC COMPANY* in a current advertisement points out that the bureaucrats, to save their own jobs, will try to sing us to sleep with the siren song of government ownership, government control, government "benefits." When you hear that song, cautions Southwestern, remember the German—the German who has had for years all of the things so many Americans seem to want, including government control or ownership of the press, radio, railroads, employment, education, medicine and corporation profits. Good, thought-provoking copy, we'd say.

*One of many who often TRY PELCO FIRST for supplies and equipment.

WE'VE SUPPLIED OIL MEN IN OUR AREA FOR 36 YEARS

PELICAN WELL TOOL & SUPPLY CO.

SHREVEPORT LOUISIANA

PELCO

Houston
Berwick
Houma
New Iberia
Lake Charles

Finch 1, 330 ft out swc TE&L Co. sec 38, Bend 4133 ft, Miss 4857 ft, abnd 4917 ft.

Valley Osage Oil Co.'s Killian 1, 1019 ft snl, 1958 ft ewl, TE&L Co. sec 211, abnd 1000 ft.

NORTH TEXAS NEW PAY TEST

Cooke County—Montgomery Failure: Magnolia's Long 1, 330 ft ewl, 1650 ft snl, Robt. Finney sur A-389, elev 755 ft, Simpson 5656 ft, Ellenburger 5817 ft, abnd 5912 ft.

WEST TEXAS WILDCATS

Tom Green County—Failure: M. D. Bryant et al's Pulliam 1, c se nw H&TC 12, blk 4, elev 2093 ft, abnd 820 ft.

Pecos County—Oil Discovery: Debs Pattillo et al's Iowa Realty Co. 1, c e¼ of n¼ of w¼ H&GN 61, blk 10, elev 2478 ft, Rustler 405 ft, anhydrite 530 ft, salt 980 ft, brown lime 1020 ft, Yates 1150 ft, flow 24 bbls 27-gr oil, 7 bbls wtr, 2-in, 1000 gals acid, Seven Rivers 1300-56 ft, td 1477 ft, pb 1356 ft.

Reagan County—Failure: Standard of Texas' University 1-24, Lse No. 28,348, elev 2656 ft, top lime 3020 ft, abnd 4750 ft.

WEST TEXAS NEW PAY TEST

Coke County — Blackwell Failure: Warren Pet. Co.'s Fowler 1, c nw nw H&TC 275, blk 1-A, elev 2161 ft, Bend 5710 ft, Ellenburger 6392 ft, abnd 6425 ft.

WEST TEXAS WILDCATS DEEPENED

Brewster County—Failure: W. B. Hinton et al's Texas American Synd. 1-A, 695 ft out nec GH&SA 66, blk 10, otd 7777 ft, elev 4233 ft, Delaware lime 2295 ft, Permian 5285 ft, Devonian 5618 ft, Silurian 5992 ft, Montoya (Maravaillas) 6460 ft, Simpson 6747 ft, Ellenburger 8365 ft, abnd 9046 ft.

Ector County—Failure: Stanolind's Cowden 1-B, c se sw T&P 12, blk 44, T-1-N, elev 3110 ft, otd 7000 ft, brown lime 3710 ft, solid lime 3855 ft, San Andres 4240 ft, Clear Fork (Holt) 5190 ft, Pennsylvanian 8665 ft, abnd 10,829 ft.

TEXAS GULF COAST WILDCATS

Brazoria County—Allen Dome Failure: Gulf's S. M. Allen et al 1, 5000 w alg sl S. McNeil sur A-94 fr sec th 1500 n at ra to lcn, dr 1st hole 8036 ft, pb&st, abnd 8177 ft.

Chambers County—S. Anahuac Discovery: Standard of Texas-Salt Dom Oil Corp.'s State D-21-1, perf 7563-72 ft, flow 2,075,000 ft gas, 3/16-in, est 41,000,000 day open, td st hole 9180 ft.

Jefferson County—E. Stowell Failure: Glenn McCarthy's McFaddin 2, 1650 fr el 400 fr nl s½ sect 143 and 320-ac lse, T&NO sur A-143, abnd 9824 ft.

TEXAS GULF COAST NEW PAY TEST

Matagorda County—N. Bay City Discovery: Sun's D. H. Braman B-2, start w cor 792-ac H lse, go n 62° e 3289 alg nwl lse th s 28° 04 mins e 2970 th 62° e 468.7 to lcn perf 8400-02 McDonald sand, flow 35 bbls 36.2-gr oil 25% wtr, 9/64-in, td 8800 ft.

TEXAS GULF COAST OUTPOSTS

Harris County—Joyce Richardson Extension: General Crude Oil's Vinnie T. Rorick 1, 467 fr n&el lot 22, 465-ac lse, J. C. Ogburn sur, sand 7120 ft, perf 7141-45 ft, flow 194.76 bbls 38.1-gr, 5/32-in, td 7602 ft.

San Jacinto County—Mercy W. Extension: Shell's Central Coke & Coal Corp. 11, start w cor sur go 1850 nely alg nwl th 950 sely at ra to lcn on 3680.98-ac lse, elev 222 df, sand 8375 ft, perf 8372-77 ft, pump 14 bbls oil 55% sw, td 14,404, pb 8455 ft.

SOUTHWEST TEXAS WILDCATS

Duval County—Failures: J. W. Gorman's W. K. Hoffman B-2, 330 s of nl 990 e of No. 1, on 320-ac lse, BS&F sur 116, abnd 2253 ft.

Argo Oil Corp.'s Gertrudis C. Canales 2, 330 fr sl 5190 fr el 433-ac lse, sh 38, Jose Hinojosa Gr, abnd 5310 ft.

Jim Hogg County—Failure: Arkansas Fuel Oil Co.'s L. J. Spoonts 2, 16,608 fr nl 10,271 fr wl J. M. Ramirez Gr blk 21, 1300 fr sl 5924 fr el 10,512-ac lse, abnd 5015 ft.

Jim Hogg County—Discovery: Standard Oil Co.'s E. G. Canales 1, 2625 fr nl 467 fr wl s½ San Juana Garcia Gnd, 808-ac lse sh 25, J. M. Hinojosa Gr A-357, Hockley 4144 ft, Pettus 5096 ft, pay 5102 ft, perf 5102-12 ft, pump 18 bbls 43.1-gr, td 5805 ft.

LOWER TEXAS COAST WILDCAT

Brooks County—Gyp Hill Failure: Sun's Mary Lasater B-1, 1980 fr nl 1980 fr wl GB&CNG RR sur 331, 800-ac lse, 1 mi ne Lasater 1, on Gyp Hill prospect, abnd 6767 ft.

WEST CENTRAL TEXAS WILDCATS

Callahan County—Failure: B. C. Mann et al's Mann 1, 1353 ft fr m/s/nl 660 ft fr m/e/el Wyatt Hickman sur No. 6, abnd 1885 ft.

Comanche County—Failure: F. O. Akin et al's Hauser 1, 660 ft out sec, C. H. Heffner sur, Bend 2438 ft, Marble Falls 2579 ft, abnd 2801 ft.

Taylor County—Failure: Northern Ordnance's Toombs 1-A, 330 ft snl 298 ft ewl se, S. P. Ry. 12, blk 9, elev 2026 ft, Swastika 3140 ft, abnd 3233 ft.

WYOMING WILDCAT

Carbon County — Discovery: Stanolind's Johnson-Parkinson 1, se ne sw 20-18n-77w, Cooper Cove, flow 6 bbls oil hr fr Dakota 4834-4912 ft, 6⅝-in 4853 ft, td 5373 ft.

WESTERN CANADA WILDCATS

Southern Alberta Plains—Taber Discovery: Dominion Oil-Nassau Explorations' Taber-Province 73-20B, se lsd 5 20-9-16w4th, swab 225 bbls 18-gr, 3194 ft.

Conrad—Failure: Dominion Oil Co.'s Conrad-Province 1, ne lsd 8 11-5-15w4th, abnd 3110 ft in Madison.

Grassy Lake—Failure: Imperial Oil's Grassy Lake 2, lsd 16 6-10-13w4th, abnd 3108 ft in lower Jurassic.

Milk River — Failure: British American's Milk River 1, lsd 8 30-2-16w4th, abnd 2970 ft in Madison.

Innisfree—Failure: May 1, sw lsd 4 27-51-11w4th, abnd 1697 ft.

United States Wildcat Starts

ALABAMA

Escambia County: Humble's Minnie E. Skinner 1, c se nw 10-3n-10e, lcn.

CALIFORNIA

Fresno County: Seaboard-Pure's 54-22, se sw ne 22-16-13, Cantua Creek area, lcn.

Kern County: Continental's Derby 1, nw ne nw 35-31-29, Arvin area, lcn.

H. H. Magee's Glide 3-11, nw sw nw 11-27-28, Mount Poso area, lcn.

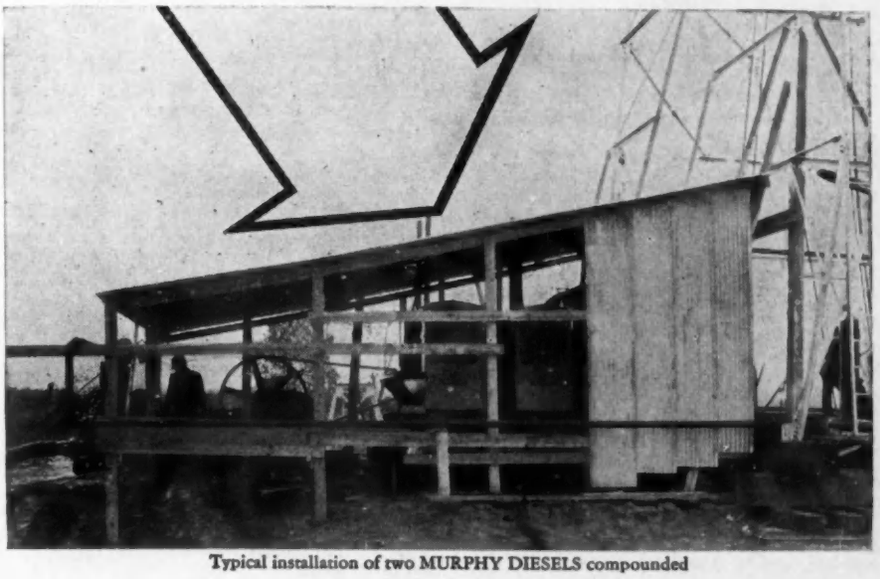
Richfield Oil Corp's S.P. 15-15, nw nw sw 15-11-19, Tejon area, lcn.

Shell's Hopkins Fee 57K-31, ne sw se 31-27-20, Antelope Plains area, spud.

Standard of California's Davidson 8-5, 36-27-27, Kern Front area, dr 1513 ft.

Standard of California's 118-27s, sw sw sw 27-30-21, Elk Hills area, lcn.

Tulare County: Barnsdall Oil Co.'s Lombardi



Typical installation of two MURPHY DIESELS compounded

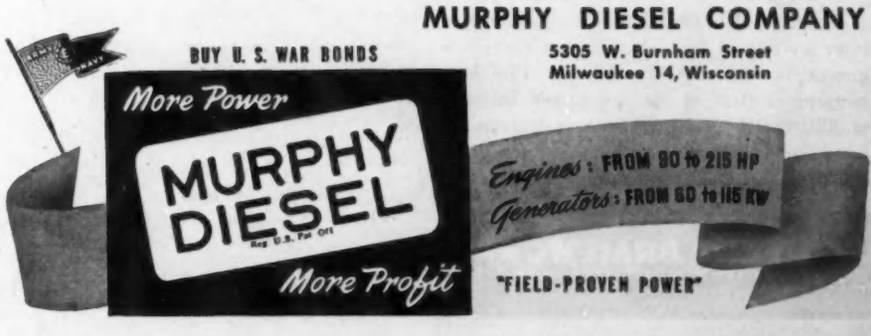
RELIABLE DRILLING - RIG *Power!*

MURPHY DIESEL Engines are modern, capable, compact power plants ... relatively light in weight but with plenty of heavy-duty ability ... adaptable, in various sizes, to all the power requirements of oil field work. In twin or multiple unit hook-ups, any required Horsepower can be obtained. The low cost of operating and maintaining Murphy Diesels ... their rugged construction, long life and consistent dependability ... lead to "more power, more profit" for oil field operations. In stationary installations as well as in heavy-duty portable equipment, all MURPHY DIESEL Engines are equipped with the time-proven Murphy Unit Injector ... interchangeable, no adjustments. Write for bulletin.

MURPHY DIESEL COMPANY

5305 W. Burnham Street
Milwaukee 14, Wisconsin

BUY U. S. WAR BONDS



Security 1, sw sw se 16-23-26, Pixley area, mim.

FLORIDA

Gulf County: Pure's Gulf-Bay 1, 23-5s-9w, mim.

Madison County: Hunt Oil Co.'s Gibson 2, se sw 6-1s-10e, dr 3444 ft.

ILLINOIS

Clark County: Beatrice Creamery's Chicago Cold Storage Co. 1, se sw sw 26-12n-13w, lcn.

Clinton County: Gulf's Schlafly 1, nw se nw 36-2n-3w, lcn.

Gallatin County: Illinois Prod.'s Brinkley 1, sw sw sw 20-10s-9e, lcn.

Hamilton County: Nat'l Assoc. Pet.'s Hicks et al 1, se nw nw 33-5s-7e, dr 872 ft.

Jasper County: Schuller et al's Lawrence 1, ne sw se 3-5s-9e, lcn.

Jefferson County: Kingwood et al's Quick 1, ne ne ne 11-2s-3e, lcn.

Kingwood et al's Gilbert 1, se se sw 19-3s-3e, lcn.

Madison County: Bayer's Grimm 1, se ne sw 20-4n-6w, lcn.

Wabash County: Wickham's Schroeder 1, nw ne se 27-2s-14w, lcn.

Wayne County: Gulf's Meyers 1, nw sw sw 25-1s-5e, lcn.

Texas Co.'s Desch 1, se se nw 15-2s-6e, lcn.

INDIANA

Dubois County: Kigo Drlg.'s Kemper 1, ne ne ne 9-3s-6w, lcn.

Vigo County: Reynold's Schrauber 1, 18-10n-6w, ne se se 18-10n-6w, lcn.

KANSAS

Barton County: Co-Op Refinery's Beran 1, swc nw 24-17s-12w, lcn.

Phil-Han et al's Simpson 1, ne ne se 15-20s-12w, mirt.

Butler County: Texas Co.'s Schwantes 1, nwc se 5-23s-4e, lcn.

Ellis County: Continental's Snyder 1, nec sw 2-13s-20w, lcn.

Ellsworth County: Bridgeport's Dolechek 1-A, swc se 23-15s-9w, lcn.

Rooks County: Continental's Kennedy 1, sw se se 28-8s-18w, lcn.

Sheridan County: Continental's Bouts 1, nw ne nw 11-6s-27w, lcn.

Sumner County: Texas Co.'s Craven 1, ne ne nw 27-33s-2e, lcn.

KENTUCKY

Daviess County: Producers Pipe Line's Goode 1, 9-N-28, lcn.

Muhlenberg County: Hobson's Ellison 1, 13-G-28, lcn.

Hobson et al's Pepper 1, 25-G-28, lcn.

Webster County: Texas Co.'s Meador et al 1, 10-L-20, lcn.

SOUTH LOUISIANA

Jefferson Parish: The California Co.'s E. P. Brady 1, begin USCGS Perot go n 80° 56 mins e 6233 to lcn in 2-16s-23e, 11,000-ft test.

NORTH LOUISIANA

DeSoto Parish: C. W. Beene's Williams 1, sw ne 25-15-15, lcn.

MICHIGAN

Allegan County: C. A. Perry's Herp 1, se nw sw 9-4n-12w, rig.

James J. McGerry's Monteith 1, sw sw se 29-2n-11w, rig.

Arenac County: Don Rayburn's State A1, s½ sw ne 27-20n-3e, rig.

Clare County: Pure's State A1, s½ ne se 15-20n-5w, lcn.

Gratiot County: Fletcher and Leman's Prichard 1, c se 36-10n-3w, rig.

Ionia County: H. J. Schrauben's Creyton 1, sw sw nw 4-5n-6w, lcn.

Kalkaska County: McClanahan Oil Co.'s Terpening 1, s½ nw nw 8-26n-5w, rig.

MISSISSIPPI

Jasper County: Angle & Angle's Masonite Corp. 1, sw sw 31-3n-11e, lcn.

Yazoo County: Vaughey & Vaughey's Sallie Ray 1, c nw sw 24-11n-2e, wor.

NEW MEXICO

Lea County: Stanolind's State 1-M, c ne sw 29-19s-35e, lcn 5500-ft San Andres test.

OKLAHOMA

Garvin County: Roodhouse's Harris 1, nw nw sw 23-3n-1e, lcn.

Hughes County: Hall's Looney 1, sw se nw 3-9n-12e, woc.

McClain County: Carter's Johnson 1, csw se c&p.

Oklahoma County: Atlantic's Wickens 1, se se se 13-12n-1w, bldg rds.

Seminole County: Summitt Drlg.'s Davis-Patterson 1, ne nw se 17-8n-7e, dr 880 ft.

Washita County: California Co's Reeder 1, ne nw 1-8n-17w, dr 110 ft.

WEST TEXAS

Pecos County: Phillips' Elsinore Cattle Co. 1, 2095 ft ewl, 445 ft nsl, GC&SF Ry. 53, blk D, lcn 10,000-ft Ellenburger test.

EAST TEXAS

Bowie County: Barnsdall Oil Co.'s Louis Heilborn 2, 388 ft snl, 696 ft ewl of s-47 ac of 97-ac tr, or 500 ft nsl, 8350 ft wel, M. H. Janes sur, 800 ft w of 7836-ft Smackover failure, lcn Smackover test.

Henderson County: Clifford S. Shive et al's Rebecca Johnson 1, 990 ft w, 330 ft s of sec of H&TC Ry. Sur No. 369, but in Geo. J. Johnston sur 395, 7 mi nw Trinidad, lcn 3500-ft Woodbine test.

Van Zandt County: Northern Ordnance's Curtis Shelton 1, 660 ft out of swc 77.47-ac tr, or 4550 ft nsl, 660 ft fr m/e/el, Leander Smith sur, Martins Mill prospect, rur for 900-ft Travis Peak test.

EAST TEXAS

Panola County: Union Producing Co.'s Allums 1, White sur, 3 mi n of Carthage, lcn.

SOUTHWEST TEXAS

Duval County: Tom Graham's John Richardson 1, 933 fr wl 2189.6 fr n&sl J. Poitevent sur 453, 640-ac lse, lcn 3200-ft test.

Starr County: Humble's R. E. Margo et ux 1, 660 fr el 1980 fr sl HE&WT sur 337, lcn 7000-ft test.

LOWER TEXAS COAST

Live Oak County: Moore Dev. Co.-Slick Oil Co.'s Clara Briam 2, 660 fr nel 2000 fr nwl 400-ac lse, Dennis McGowen sur, lcn 8500-ft test.

Nueces County: Hewit & Dougherty's Clara Buntzer 1, 467 fr nel 1808 fr nwl 328-ac lse, e½ sh G. Bluntzer partn, J. J. de la Garza Montemayor Gr, lcn 6500-ft test.

SOUTH CENTRAL TEXAS

Lee County: Seaboard Oil Co.'s R. R. Beaman 1, 1880 fr el 1520 fr sly 503-ac lse, J. B. Taylor sur, lcn 5000-ft test.

NORTH TEXAS

Archer County: D. H. Bolin et al's C. L. Abercrombie 1-E, 1070 ft out nec of 347-ac tr, W. S. Blount sur A-13, lcn 1400-ft test.

Denton County: Northern Ordnance's J. M. Gracie 1, 330 ft out swc, G. M. Dial sur A-379, 3 mi e Pilot Point, lcn 2400-ft Ellenburger test.

Northern Ordnance's D. M. Light 1, 330 ft out nwc, G. Messenton sur A-804, 2 mi s Pilot Point, lcn Ellenburger test.

Young County: Northern Ordnance's W. L. Boyd 1-B, 600 ft snl 1167 ft ewl TE&L Co. sec 1455, lcn 1000-ft cable tool test.

TEXAS GULF COAST

Brazoria County: Continental's Ramsey State Prison Farm A-1, Lochridge area, 17,300 e 1200 s of nwc Stephen Richardson sur A-22, on 1892-ac lse, lcn 9500-ft test.

Colorado County: Shell's A. S. Lewis 1, 1500 fr e 450 fr nl BS&F sur A-110, sect 797, lcn 11,200-ft test.

Lee County: Seaboard Oil of Delaware's R. R. Beaman 1, 1880 fr el 503-ac lse, 1520 fr sly/n/l lse, 1880 fr el 1520 fr sl, J. B. Taylor sur, lcn 5000-ft test.

Matagorda County: Skelly's Schweinle 1, 1650 fr nw&swl of ne 580-ac of 1224-ac tr, lcn.

Sun's Braman-Crier 1, 4620 nw of sel 660 ne of swl 3142-ac lse and J. Crier sur, n part of county, elev 65.5 ft, lcn, 10,000-ft test.

Wharton County: Humble's Donald & F. B. Duncan B-2, Hungerford area, 3798.3 sw of ne 7270 nw of sel David Wade sur A-64, 769.2 w Chas. Gillis tr, lcn 7500-ft test.

WEST CENTRAL TEXAS

Jones County: Geochemical Surveys et al's A. A. Gustafson 1, 1050 ft snl 2150 ft wel H&TC Ry. 8, blk 4, lcn 5000-ft rotary test.

Thos. D. Humphrey et al's A. John 2816 ft snl 330 ft ewl T&P 51, blk 16, lcn 3500-ft cable tool test.

McCulloch County: D'Arcy M. Cashin et al's S. E. Smith 1, 660 ft out nec 750-ac tr, or 5700 ft nsl 3010 ft ewl, L. Erkhardt sur No. 1293, lcn 2700-ft test.

W. H. Vernor et al's Eubanks 1, 2300 ft snl 300 ft wel of 200-ac tr, John Minor sur No. 451, lcn 300-ft test.

Shackelford County: Shell's T. W. Lee 1, 2338 ft snl 332 ft ewl sec 50, Wm. Woodward sur, lcn 4850-ft Ellenburger cable tool test.

Stephens County: Mudge Oil Co.'s W. E. Adams 1, 467 ft out nwc s½ TE&L Co. sec 2955, lcn 4500-ft cable tool test.

WYOMING

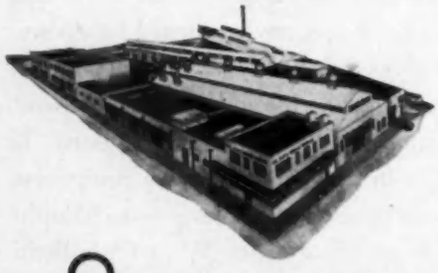
Fremont County: Kerlyn Dr. Co.'s Shoshone 1, ne ne 16-5n-2w, Sheldon dome, mi.

WESTERN CANADA

Central Alberta Plains—Lloydminster: Lloyd Clinch and Associates' Silverdale 1, sw lsd 10 12-49-1w4th, sp.

Innisfree: May 1-A, sw lsd 4 27-51-11w4th, dr 139 ft.

Southern Alberta Plains — Purple Springs: Imperial Oil's Purple Springs 1, lsd 13 11-10-15w4th, ru.



OUR NEW PLANT pictured above is the home of BRONZOID. This product contains pre-treated lead which arrests crystalline growth in the resultant bronze. The high compressive strength and low Brinell hardness of BRONZOID combine the best features of bronze and babbitt metal. That's why it is called, "The Ultimate in Bearing Bronze."

OIL CITY BRASS WORKS
FOUNDERS MANUFACTURERS MACHINISTS

Squeaks from the Bull Wheel

Biased Girls

"How is it you don't like the girls?"

"They're too biased."

"Biased, what do you mean?"

"It's bias this and bias that, until I'm broke."

Spiders

"Mary, what's the reason for those cobwebs on the ceiling?"

"I don't know, Mum, unless there's spiders in the house."

Speedy Mechanic

"You are positively the slowest mechanic who ever worked on a truck. Aren't you quick at anything?"

"Yes, nobody can get tired as quick as I can."

Flat

"I am going to give you a brassiere for your birthday. What size do you wear?"

"Never mind. Give me the money because I'm flat busted."

Cycling

The dairy farmer caught his helper offering a pail of milk to a cow.

"Hey, what are you doing there?"

"Well, it looked so darn thin I thought I'd better run it through her again."

Impolite Question

"Doctor, is there any danger of the operation proving fatal?"

"Really, my dear chap, considering that we are experimenting on you free of charge, your idle curiosity is hardly good form."

Proper Shape

"The upper part of Al's body is shaped like a beer keg."

"That's too bad."

"It's only natural. That's what he uses it for."

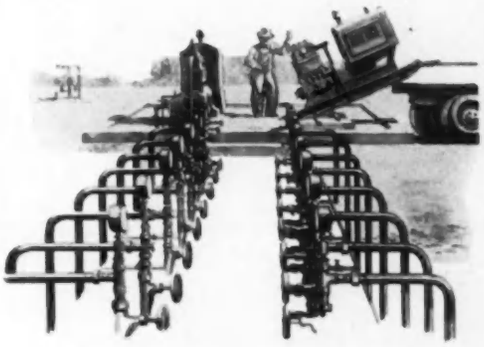
Durable

"That's a good looking hat you are wearing."

"Yes, I bought it five years ago, had

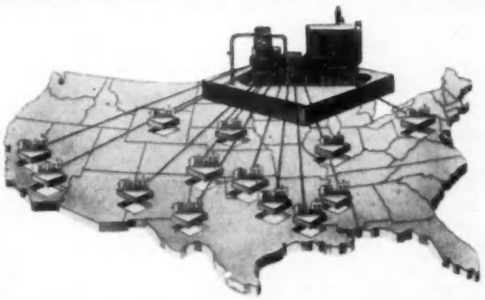
ONLY KOBE GIVES YOU THESE PUMPING ADVANTAGES

CENTRALIZED INDIVIDUAL WELL CONTROL

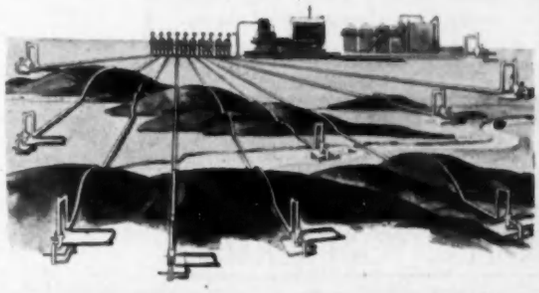


GREAT PUMPING FLEXIBILITY

COMPLETELY MOVABLE AS PRODUCTION SHIFTS



UNIVERSAL ADAPTABILITY

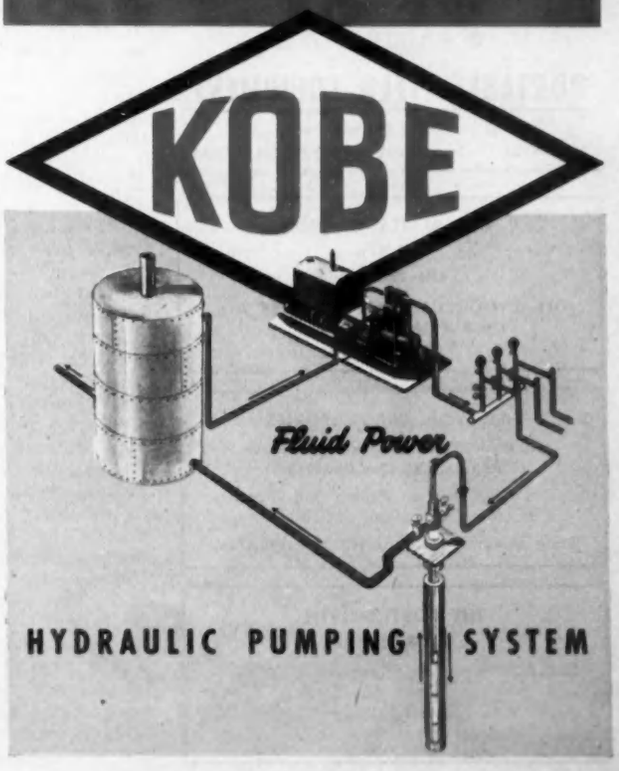


MULTIPLE WELL OPERATION

THE "FLUID POWER" of the Kobe Pumping System is helping production men develop many new pumping advantages never before possible.

Because of "fluid power" you can regulate bottom hole pump speeds by a simple turn of a surface control valve. Because of "fluid power" you can pump more wells or pump the same wells faster by adding a small compact triplex to your system. Because of "fluid power" Kobe equipment can be made small and is easy to install, being quickly movable by lease truck from one well to another. Because "fluid power" will flow through small pipe where directed, Kobe pumping is readily adaptable to any type of production. And because of "fluid power" you can control any number of wells from one central plant, thus insuring big savings in production costs, manpower and horsepower.

Add all these advantages together and you get the reason why Kobe today is changing pumping techniques throughout the principal producing areas. And the reason, too, why Kobe's "fluid power" should be working for YOU.



KOBE, Incorporated *General Offices & Plant: 3040 East Slauson Ave., Huntington Park, Calif. • Mid Continent Division Offices and Shops: 230 S.E. 29th Street, Oklahoma City, Okla. • California Division Offices: 3040 East Slauson Ave., Huntington Park, Calif. • Export Agent: Petroleum Machinery Corp., 30 Rockefeller Plaza, New York.*

PUMP THE MODERN WAY...USE KOBE

it cleaned three times, changed it twice in restaurants, and it's still as good as new."

Second Best

"I hear Jane is marrying a second lieutenant."

"Yeah, the first one got away."

Romance

"How did you come to know your husband?"

"Oh, it was so romantic. He ran over my first husband in his car."

Privacy

"Oh, Phil, it says 'Entire Balcony, 40 cents.'"

"Well, what of it?"

"Let's get it so we can be all alone."

Standco
NO-SMOKE
STANDCO BRAKE LINING
for the easiest brake known. It "feeds off" evenly. Standco never scores brake rims. See page 2808 Composite Catalog.
Standco Brake Lining Co.
HOUSTON

PRECISION
INSPECTION SERVICE
NON-DESTRUCTIVE INSPECTION
- MAGNAFLUX
- X-RAY
- RADIUM

PORTABLE FIELD EQUIPMENT
6006 NAVIGATION BLVD.,
W. 6-6922 P. O. 1901 HOUSTON, TEXAS

1944 MAILING LISTS
of the
Oil Industry
OIL INDUSTRY MAILING LIST CO.,
909 Tulsa Loan Bldg.,
Tulsa 3, Okla.

HOUSTON LABORATORIES
Analytical and Consulting Chemist
Podbielniak Gas Analysis
Oil Field Brines, Waters and Cores
Complete Evaluation of Crude Oils
Long Distance 267. Box 132. Houston, Tex.

THE FORT WORTH LABORATORIES
Analysis of oil field brines, cores, gas, oil and minerals. Field gas testing. R. H. Fash, Vice President; Long Distance 138
823½ Monroe Street, Fort Worth, Texas

Letters to the Publisher

DEAR MR. DUDLEY:

It is not often that I take issue with any periodical or newspaper, but in as much as you recently wrote a severely critical editorial of the Commission, and in your May 1st issue an article in which you personalized me, I am calling your attention to the fact that the information given you with reference to the Wasson field hearing was so at variance with the facts that I am constrained to give you what actually took place. I do this, believing that all reputable news disseminating agencies publish what they consider to be facts and facts only, and I confidently trust you will run this letter in your next issue, as I am sure you will agree that anyone is entitled to a defense against a misstated fact concerning him.

Your editorial stated that "during the meeting, another commissioner announced he had made up his mind, which was to oppose any change." The only inference that could be drawn from this statement was that opponents had no chance to present their evidence. This information was a gross error which could not have been made except intentionally by the person who gave you your information. The facts are the chairman of the commission, after some 45 minutes of interrogation of protestant's witness, both direct and cross, asked if there were any more witnesses. No one spoke up or offered, and then the chairman proceeded to accept "statements for the record" which are in no wise testimony but only indications of position by those making them.

At page 62 of the record of this hearing, which record contains only 66 pages, the testimony of our engineer, Mr. Baumel, shows that the present ratio prescribed by the field rules for Wasson field *is not creating waste*. When no other witnesses indicated their desire to testify, I stated I was ready to make my decision which was "I think we should leave the 5000 to 1 as it is until such time as the allowable is increased or there is imminence of waste present." This was done at the conclusion of the testimony of witnesses and not "during the meeting" as your very unfair editorial stated.

Realizing that such periodicals as yours are relied upon by the industry to correctly and truthfully state facts, and it not having been done in this instance due to misinformation furnished you, I am simply giving you what the transcribed record shows.

My action in stating my conclusion at the termination of the hearing is in line with the policy I have pursued ever since I came on this commission. I have consistently tried to render early decisions on all controversial matters, this in an effort to do away with the long delays that formerly marked the conduct of the Railroad Commission before I was elected thereto, and out of which grew just criticism by the industry of the commission for its failure to promptly dispose of matters submitted to it. There having been only one witness, besides our own engineer, and such witness having been introduced by the protestant, there was nothing else the commission could honestly do in the light of the record made but leave the rule in effect. The other operators in the field who were present, had they had so desired, could have introduced evidence to change the rule but did not do so, though asked by the chairman if there were other witnesses to be heard. Regardless of whether the commission thought the 5000-to-1 rule should be changed, all the testimony had in this case, including the testimony of our own engineer Mr. Baumel, would have precluded the commission from any other finding. Apropos of your mention of the conduct of Caesar's wife, I would remind you that in spite of every effort upon Caesar's wife to conduct herself so as to be above even the remotest breath of suspicion, the fact remained that the woman of easy virtue whose paramour perchance had lost the side-door entrance to the triumvirate of which Caesar was a member had no hesitancy in spreading malicious rumors in an effort to intimidate Caesar into yielding to their dominating demands.

OLIN CULBERSON.
Railroad Commission of Texas,
Austin, Texas.

MY DEAR MR. CULBERSON:

The crux of the whole matter, Mr. Culberson, is whether or not you announced that you had made up your mind before additional witnesses were invited to testify.

THE OIL WEEKLY says that you did make your statement before additional witnesses were invited; that the transcript plainly shows this; that witnesses present who would have presented testimony felt that there was no reason for them to testify since you already had made up your mind.

We have a representative at the hearing; we have talked with others who were there, and we have a certified complete transcript of the meeting. We said in a letter to Mr. Amon G. Carter, published in THE OIL WEEKLY of May 1, that you, Mr. Culberson, may have been within your rights but that it did not *look right*. We have not changed our mind about that one bit.

As to the justice of the decision of the Railroad Commission in the Wasson matter we have expressed no opinion. Our criticism was on the appearance of things. If the meeting were held over again, and the transcript of it and our reports on it were identical with the transcript and reports we received on the former hearing, we would write and publish the same editorial over again.

RAY L. DUDLEY,
Publisher, The Oil Weekly.

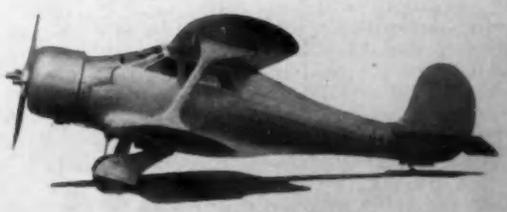
William M. Barret, Inc.
Consulting Geophysicists
Specializing In Magnetic Surveys
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique
GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

Official U.S. Army Photograph

Above All Else...

Beechcrafters are exerting every effort to hasten the day of Victory. War Production comes before all else at Beechcraft.

Beechcraft Bomber Trainers, Beechcraft Navigation Trainers, Beechcraft Transitional Trainers, Beechcrafts for Photographic Mapping, Beechcraft Twin Engine and Single Engine Personnel Transports—thousands of Beechcrafts are working for our Armed Forces, and still there is no let-up in Beechcrafters' determination to "Kill 'em with Production" or in deliveries off the production line.



Beech Aircraft
CORPORATION

BEECHCRAFTS ARE DOING THEIR PART — *WICHITA, KANSAS, U. S. A.*

Notes for the Equipment Buyer and User

Moulded Brake Lining

THE GATKE CORPORATION

The Gatke Corporation, 228 N. La Salle Street, Chicago 1, Illinois, is announcing an improved moulded brake lining with wire back reinforcement. Designed to replace woven brake lining which is difficult to obtain, this improved product has many applications wherever brake linings are needed. It can be used on external, band or contracting type brakes. The material is furnished in a range of sizes up to ⅜-inch thick by 6 inches wide.

Improved Moulded Brake Lining

Welding Supplies

AIR REDUCTION SALES COMPANY

Air Reduction Sales Company, 60 East 42nd Street, New York 17, has published a revised catalog and price list of gas- and electric-welding supplies and accessories.

Products include gas-welding rods in a wide range of metals, types and sizes for all welding requirements. Also included is detailed information of assistance to buyers, such as: sizes, dimensions, weights, stock numbers, forwarding data and recommended uses for products.

Among the new items described are the Airco No. 66 welding helmet which is leakproof. The headgear is adjustable to headsize and is of the sliding type, with two positive stop joints that keep it centrally located.

Another new item is the Suregrip Rod Saver that effects savings in electrode cost because only 5/8-inch of the bare electrode can be inserted in the socket, thus eliminating wasteful overhang. The design of the handle with 28 large openings reduces contact with the welders' gloves and minimizes overheating, even when electrodes are burned to a 1-inch stub. Electrodes are firmly gripped by a quarter turn of the handle. The handle is made of insulating material not affected by moisture, or heat.

Also described is the Atlas Model A Dual-Tool for cleaning welds. This is a dual purpose tool that cuts down tool handling time. It consists of a chisel-headed chipping hammer combined with a wire bristle brush. The brush-reversing feature doubles its life. All parts are readily replaceable.

Cable Splicing Rig

GARLINGHOUSE BROTHERS

Garlinghouse Brothers, 2416 E. 16th Street, Los Angeles 21, California, is now marketing the Gar-Bro Cable Splicing Rig, a structurally self-contained unit designed to facilitate all the necessary operations in splicing cable.

Any standard splicing vise may be attached to the stand which is supported by a ball-bearing revolving base. Directly above the splicing vise is a quick-opening jaw-type vise supported by a tension member. The gripping vise is rapidly actuated by spinning a large, heavy rimmed wheel. Any desired tension is put on the cable between the two vises by vertical adjustment of the tension member through a double-acting screw provided with a hand wheel. The cable is easily untwisted for splicing by revolving the splicing vise stand.

For compactness in shipping and handling, top and bottom members of the rig are detachable from the vertical member. The unit may be set up, bolted to a column or post, or lashed to a tree and be in service within a few minutes. Provision is made for mounting either vertically or horizontally by means of mounting pads. The overall size, set up, is 96 inches by 45 inches. Weight is 250 pounds, with no section weighing more than 100 pounds. A perforated shelf mounted on the back of the splicing vise holds tools, and hooks are provided on the vertical member for other tools used by workmen.

Piping Pointers

Crane Company, 836 South Michigan Avenue, Chicago 5, Illinois, has published "Piping Pointers," for industrial maintenance men. The purpose of the publication is to make available practical information which the company has developed in its 89 years of experience. Subjects covered include: the language of piping; valve designs and how they operate; the range of pipe fittings; hints on handling valves, fittings and pipe; how to make up a screwed joint; how to make up a flanged joint; procedure for making up a solder joint; welded pipe joints; how to install a globe valve; what to do when valves leak; planning the job with precison. The booklet is illustrated with many cross-sectional drawings.

Moorlane Company Opens Two More District Offices

Moorlane Company, Tulsa, has opened two new district offices, at 119 Hendricks Building, Odessa, Texas, with G. P. Jackson as manager, and at 3103 Apco Tower, Oklahoma City, with G. H. Jennings, manager. The company's other offices are at Houston, Kansas City, Amarillo and Wichita, with warehouse stocks at Tulsa, Kansas City, Amarillo, and Oklahoma City.

"E" Award

Gaso Pump and Burner Manufacturing Company, Tulsa, has been awarded the Army-Navy "E" for efficiency in production of war equipment, and materials.

Jones & Laughlin Supply Company To Operate Atlas Supply Stores

Jones & Laughlin Supply Company has purchased stores and inventory of Atlas Supply Company, of Muskogee, Oklahoma, effective May 15. All stores formerly operated by Atlas Supply Company are now under direction of Jones & Laughlin Supply Company and will continue to function without any interruption of service to customers.

Stores included in the purchase are located at Kermit, Gladewater and Overton, Texas; Muskogee and Oklahoma City, Oklahoma; Bushton, Russell and McPherson, Kansas; Grayville and Salem, Illinois; and Artesia, New Mexico.

National Tube Company Makes Houston District Office

Conversion of the Houston sales office of National Tube Company into an independent district office was announced May 16 in Pittsburgh by National Tube Company, a subsidiary of United States Steel Corporation. Forrest A. Marsh of Houston has been appointed district sales manager. Prior to the conversion, the Houston sales office operated under the Dallas district.

According to officials of National Tube Company in Pittsburgh, the conversion of the Houston sales office to a district office will enable the company to increase its service to the oil and gas trade and other industries in the Texas Gulf Coast and Southwest Texas areas.

H. M. Miller Sales Manager For Pattin Brothers Division

Pattin Brothers Division of Acme Fishing Tool Company, Marietta, Ohio, announces appointment of James H. Warburton as sales manager, with headquarters in Marietta. He was formerly vice president of Harry M. Miller advertising advertising agency, Columbus, Ohio.

"M" Award Renewed

Wilson-Snyder Manufacturing Company Division of Oil Well Supply Company, Braddock, Pennsylvania, has been awarded the third gold star to be added to the "M" pennant, for efficiency in production of equipment for the Maritime Commission.

Climax Appoints Allen S. George As Special Field Representative

Climax Engineering Company, Clinton, Iowa, and McAlear Manufacturing Company, of Chicago, announce the appointment of Allen S. George as special representative in the Mid-Continent and Southwest areas, with headquarters at 3416 Cockrell Street, Fort Worth, Texas. For nearly thirty years, George has specialized in the application of oil field and industrial equipment, and has spent

A. S. George

PIPE ACCORDING TO THE A.S.A. LAW OF DESIGN

Mono-Cast Centrifugal Pipe can be manufactured in specific weights for specific laying conditions, and in accordance with the recently adopted A.S.A. Law of Design. You get the *exact* pipe your conditions call for.

PROMPT DELIVERIES with suitable priorities.

AMERICAN CAST IRON PIPE COMPANY

Birmingham 2, Alabama

SALES OFFICES IN PRINCIPAL CITIES

Exploration Geophysics

By

H. J. JAKOSKY, Sc. D.

EXPLORATION GEOPHYSICS describes the fundamental theories, equipment and field techniques of the recognized exploratory geophysical methods and illustrates their application to problems of economic geology. Concisely and clearly written, it is a valuable book for geophysicists; geologists; teachers; physicists; petroleum, mining and civil engineers; supervisors and production men of oil and mining companies; supervisors and directors of public works; patent attorneys; prospectors; et al., who need the latest and most up-to-date, authoritative information. Unequalled in completeness of authoritative information and clarity of expression. It is a complete compilation of modern Geophysical techniques.

800 pages • 430 illustrations • Size 6x9 • Price $8.00

Send orders to

The Gulf Publishing Company

P. O. Box 2608 **Houston, Texas**

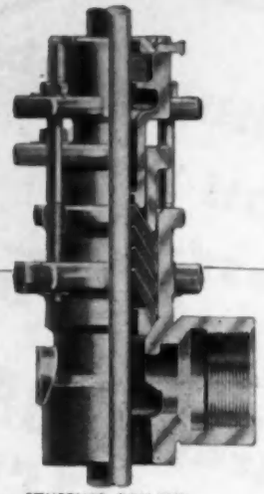
Sizes and models for all lifting jobs Mechanical and Hydraulic Jacks

WRITE FOR BUDA JACK POCKET MANUAL

BUDA

THE BUDA COMPANY

15436 Commercial Ave. Harvey (Chicago Suburb), Illinois



STUFFING BOX-TEE
(T-Base Type)

SAVE

RUBBER • TIME • OIL!

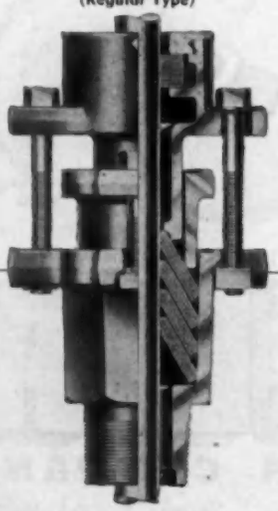
Remember this . . . the ordinary conventional box will use 660 times as much rubber as a Hercules Cone Packed Box to get the same job done. This takes no account of time lost in innumerable shut-downs for repacking the ordinary box. Another thing, Hercules Cone Packed Boxes will not leak, even if well pumps off. Be practical . . . do YOUR part in America's War Effort, by saving rubber, time and oil . . . install a Cone Packed Box TODAY.

HERCULES TOOL COMPANY

TULSA OKLA.

Box 286

STUFFING BOX
(Regular Type)



22 years with The National Supply Company, and 7 with the Mid-Continent Supply Company.

Smith Appointed Worthington Commercial Vice President

Worthington Pump and Machinery Corporation has appointed Walter D. Smith of Tulsa, commercial vice president. A graduate of Carnegie Institute of Technology, Smith has been connected with the Worthington organization since 1923, except for a period of three years, 1933-36, when he was vice president and general manager of American Natural Gas Company of Shamrock, Texas. For the past four years he has been manager of Worthington's Tulsa district office, as well as Southwestern manager of the engine sales division. In his new capacity, he will supervise the corporation's business in the Southwest.

W. D. Smith

Advertisers' Index

* Indicates detailed information on products and services included in 1943-44 edition of Composite Catalog of Oil Field and Pipe-Line Equipment.

*Ajax Iron Works 21
*American Cast Iron Pipe Co. 71
*American Iron & Machine Works Co. ..... IV Cover
*American Sand-Banum Co. 36
*American Steel & Wire Co. 28
*American Well & Prospecting Co. 39
Wm. M. Barret, Inc. 68
Beech Aircraft Corp. 69
*Brown Oil Tools, Inc. 40
*The Buda Co. 71
*Cameron Iron Works 55
Columbia Steel Co. 28
The Continental Supply Company 23
Cook Heat Treating Co. 63
Crane Co. 33
Dedman Foundry & Machine Co. 43
Dowell, Inc. 4
*Enardo Foundry & Manufacturing Co. 60
Fort Worth Laboratories 68
Gulf Engineering Co. 72
*Hanlon-Waters, Inc. 45
Harrison Equipment Co. 72
*Hazard Wire Rope Division American Chain & Cable Co. ..... III Cover
*Hercules Tool Co. 72
Houston Laboratories 68
*Hughes Tool Co. ..... I Cover
*Hunt Tool Co. 27
The International Nickel Co. 19
*The Jeffrey Manufacturing Co. 42
Jones & Laughlin Supply Co. 61
*Kobe, Inc. 67
*Lane-Wells Company 59
Lebanon Steel Foundry 49
*LeRoi Co. 58
Lucey Products Corp. 34
*Jas. P. Marsh Corp. 41
Mercantile National Bank 52
*Mission Manufacturing Co. 50
*Lee C. Moore & Co. 46-47
Murphy Diesel Co. 65
*W. C. Norris Manufacturer, Inc. 6
*Oil City Brass Works 66
Oil Industry Mailing List Co. 68
*Patterson-Ballagh Corp. 2
*Pelican Well Tool & Supply Co. 64
Precision Inspection Service 68
*John A. Roebling's Sons Co. 1
Southwestern Gas and Electric Co. 32
*Spang & Co. 54
*Sperry-Sun Well Surveying Co. 34
*Standco Brake Lining Co. 68
Texas Electric Steel Casting Co. 31
Texas Pipe & Supply Co. 53
*Texasteel Manufacturing Co. 3
*The Thermoid Co. ..... II Cover
*Thornhill-Craver Co. 72
*Union Wire Rope Corp. 37
United States Steel Corp. 28
Weatherford Spring Co. 36
Whitney National Bank of New Orleans 35
Woodward, Wight & Co. 35
Young Engine Corp. 42
Youngstown Sheet & Tube Co. 17

FEED WATER ENGINEERING

For high boiler efficiency and low maintenance, investigate our feed water engineering service. Prevents scale formation . . . protects boiler from corrosion . . . prevents caustic embrittlement.

10 years successful experience

GULF ENGINEERING CO., INC.

"Service, Not Promises"

307 M & M BUILDING
HOUSTON, TEXAS

916 S. PETERS STREET
NEW ORLEANS, LA.

GEOPHYSICAL TRANSFORMERS

sealed against Sub tropical humidity—"Sextuplex shielding," improved uniformity, minimum size and weight, *plug-in terminal block.

*Also available with terminal lugs.

GEOPHONE CABLE

Full line of Geophysical electronic supplies.

HARRISON EQUIPMENT COMPANY
1422 SAN JACINTO
PHONE PRESTON 4149
HOUSTON • TEXAS

ELECTRONIC • OIL EXPLORATION • SUPPLIES

UNIBOLT

"BIG INCH"

COUPLINGS

Are more widely used on pump suctions than any other connection. There must be a reason!

UNIBOLT
THE ONE BOLT COUPLING

THORNHILL-CRAVER COMPANY
HOUSTON